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BRITAIN'S BEST-SELLING MAGAZINE FOR THE AMSTRAD

CPC

GX4000

PLUS


ISSUE No. 74
NOVEMBER 1991
£2.50

AMSTRAD ACTION

More Amstrad reviews, tips, letters, help, info and fun than any other mag!

TURTLES 2

The Coin Op Game

Will it be the Christmas number one? Grab a pizza the action on this month's covertape...



WHICH PRINTER?

Find out the best one for you in the first of our brand new buyers' guides.

PLUS – Fujitsu's excellent new 24-pin DL900 reviewed on page 61

TERMINATOR 2

Hasta la vista, baby! The roughest, toughest licence ever gets reviewed on page 34...

What, no covertape? Check with your newsagent!

SAVE £££s!

CONSOLE/PLUS OWNERS –

The new 6128 Plus and GX4000 console can't load our covertape, but we can offer you a special money-off deal on the latest cartridge software. Check out the AA Special Offers section for more...

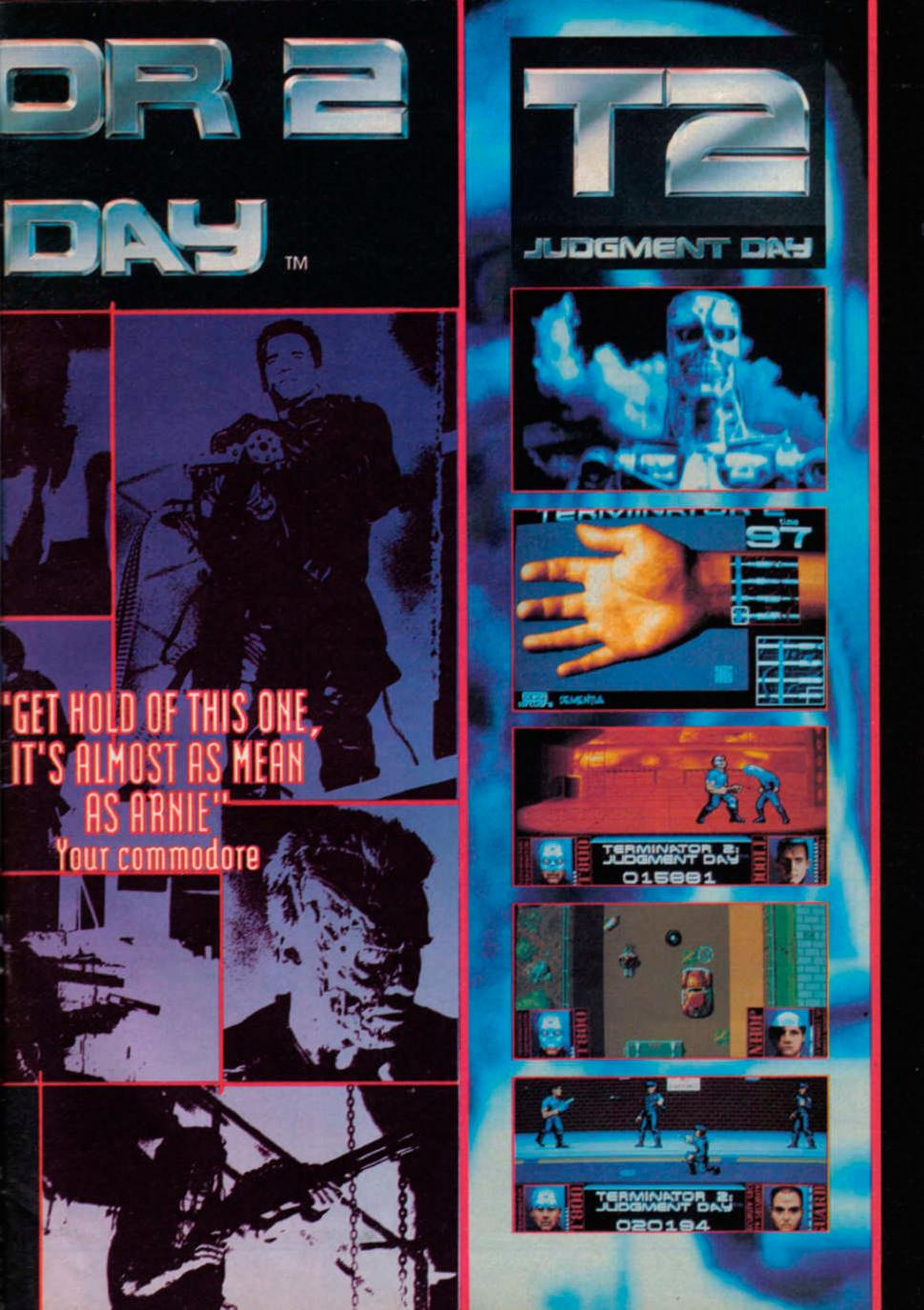
ALSO ON DISK!

Want a disk version of the AA covertape? No problem! See the tape pages...

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19 pages of games news, previews, charts, reviews, cheats and tips


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97
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020184

ACTION TEST

PLUS...

SERIOUS

REGULARS

ABC 35,159
Member of the Audit Bureau of Circulations
January-June 1991

LINE UP



US Gold's arcade epic is just about the best beat-em-up conversion we've ever seen...

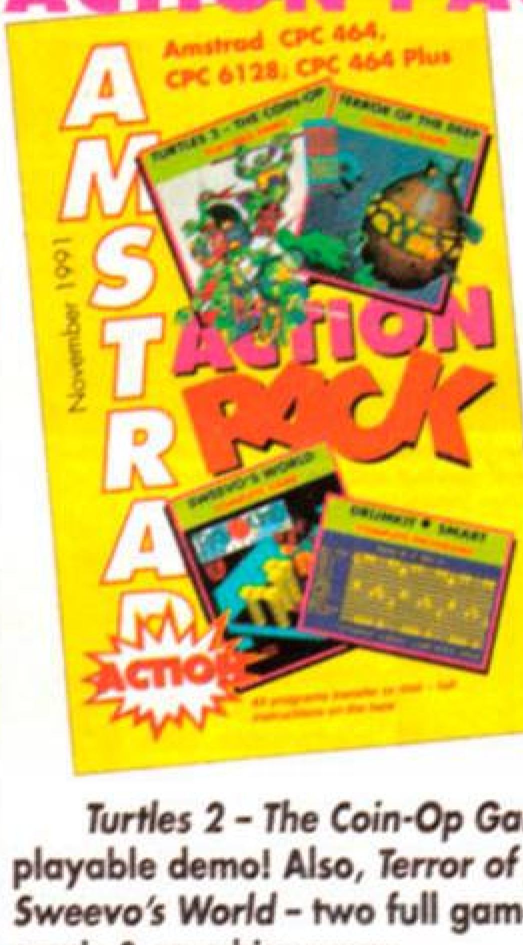
52



It broke all records at the box-office – will Ocean's latest film licence do the same on the CPC?

34

ACTION PACK



Turtles 2 – The Coin-Op Game – playable demo! Also, *Terror of the Deep*, *Sweevo's World* – two full games... PLUS music & graphics progs

6



62

The new, improved AA Buyers Guide starts this month. This ish: printers and platform games

FUJITSU DL900 REVIEWED



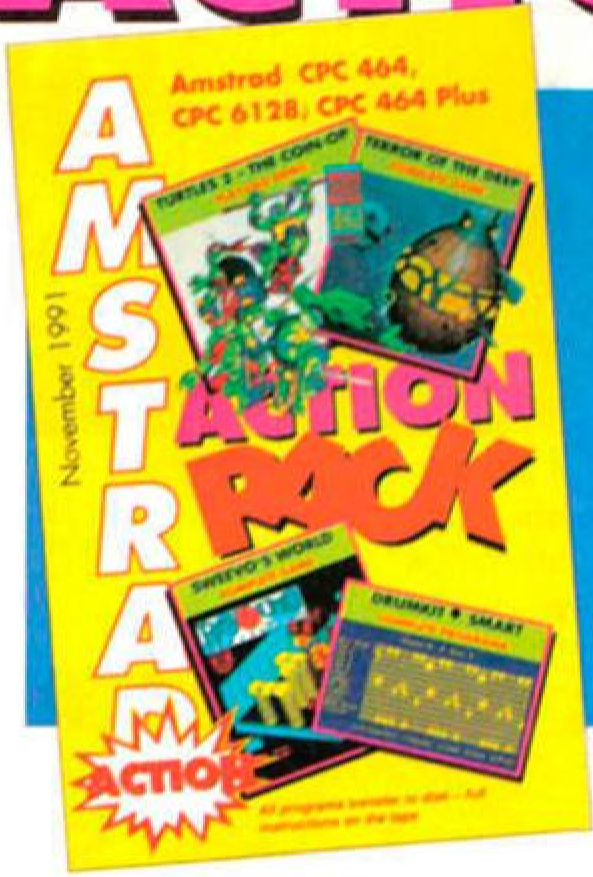
61

This printer has a footprint barely larger than your CPC keyboard – but it's 24-pin, takes A3 paper AND it's affordable...

Future Publishing Limited Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW

Tel: 0225 442244 ● Fax: 0225 446019 ● **Editor** Rod Lawton ● **Consultant Technical Editor** Adam Waring ● **Staff Writer** Adam Peters ● **Contributors** Andy Price, Stuart Whyte, Phil Howard, Jerry Glenwright, Alex van Damm, Martin Young ● **Art Editor** Paul Morgan ● **Additional design** Maryanne Booth ● **Tortoises** Cleethorpes Pet Emporium ● **Advertisement Manager** Cheryl Beesley ● **Publisher** Jane Richardson ● **Promotions Manager** Michele Harris ● **Publishing Assistant** Tamara Ward ● **Group Publishing Director** Greg Ingham ● **Production** Melissa Parkinson ● **Subscriptions** Christine Stacey, tel: 0458 74011 ● **Mail Order** Claire Bates, tel: 0458 74011 ● **Circulation Director** Sue Hartley, tel: 0225 442244 ● **Circulation Assistant** Kate Hodges

ACTION PACK



HOW TO LOAD THE COVERTAPE

Loading the programs couldn't be easier! Type RUN" (followed by RETURN) and press a key to start the tape. (A shortcut way to get RUN" is to hold down CONTROL and tap the small ENTER key.)

A menu screen will appear in a short time. Select the program you wish to load. Press SPACE to highlight the program you want followed by RETURN to load the program. The *Turtles 2* demo and *Terror of the Deep* are on side one of the tape. *Sweevo's World, Drumkit* and *Smart 2* are on side two. Turn the tape over and rewind to the begining to load these programs.

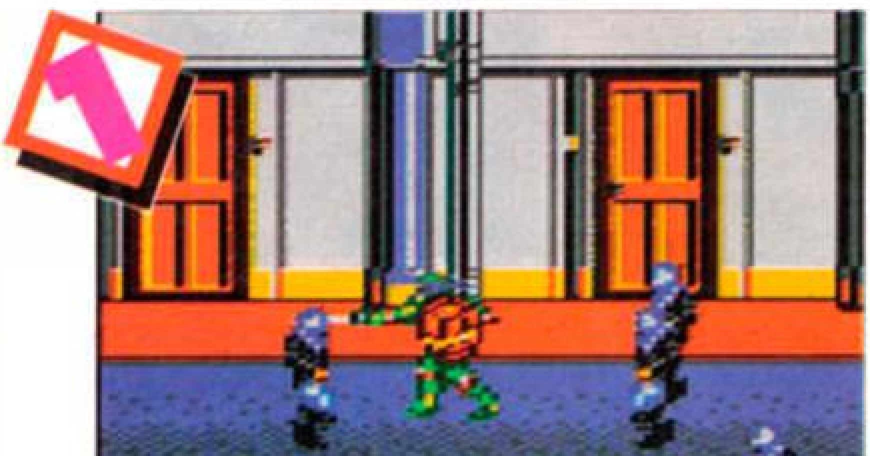
Note that *Drumkit* and *Smart 2* must be loaded direcly from BASIC with the RUN" command.

● *If you have a disk drive connected to your machine you'll first have to type |TAPE to switch the machine to tape loading rather than disk loading. (The | is obtained by pressing SHIFT and @) The computer will load the next program.*

TURTLES 2
- THE COIN-OP GAME


● **Ravioli joins the battle, swooping in with his sword waving and his shell flapping. Can you master those turtle fighting moves?**

Caralumba Turtles fans, it's pizzas all round (but don't mention the numb-chuckas), as our four heroic reptilians take to the screens of our CPCs once more, to do battle with untold nasties in the streets of New York. And hey, we don't mean rent collectors and traffic wardens.


● **Heroes in a half shell and no mistake. Here's Mantovani, sticking a sword into someone's eye. Not very friendly if you ask us. Kids today, huh?**

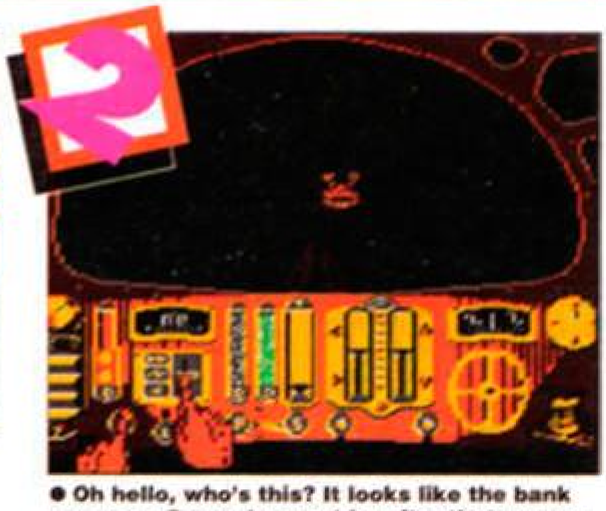
Turtles 2 is a conversion of the popular Konami coin-op of constant kicking confrontation with cartoon criminals. Er, cripes! One or two players can play, taking the roles of Rembrant, Picasso, Monet and Spaghetti as they do battle with green and purple things. You run, you jump, you kick, you wave your sword around, and you try to get them before the so-and-sos get you.

Here's the whole of the first level for your perusal, and there's a whopping fourteen more where this came from. The full game's due out in time for Christmas, so if you enjoy the demo, you know what put on your list for Santa (along with the mountain bike, 6128 and colour telly that you ask for every year). Caralumba!

• ***Turtles 2 Controls***
Player one keyboard, player two joystick.

A .... Up
Z .... Down
X .... Left
C .... Right
V .... Fire

TERROR OF THE DEEP


● **Oh hello, who's this? It looks like the bank manager. Damn, he must be after that money. Better get rid of him. Er, let's try this button...**

We're big fans of underwater nonsense here at *Action Pack*. In the past we've given you *Hydrofool*, a *Thunderjaws* demo and stuff like that. Now we give you this. You're steering a bubble-shaped submersible around Loch Ness, looking for aliens.

Quite why you're doing this we can't tell you, unfortunately, because we've lost the instructions. What we can tell you is that the two hands on the controls at the bottom of the screen are yours. You left hand is permanently on fire. The right whizzes around all over the place fiddling with the various controls that control the speed, steering and depth of the craft, which of the four windows you're staring out of, what weapon you're using etc.


● **Oops. That must have been the 'turn the sky purple and smash the windscreen' button. Hope there's a manual in the glove box.**

Part of the fun is finding out what the controls do, so we won't spoil it by telling you. (In other words, we don't know.) What we can tell you is that that you've got a limited amount of air, the weapon that makes the screen turn purple is useful for killing nasties that stick to your ship, and there are ways to increase your life expectancy, but you're going to have to find them yourselves! An arcade adventure shoot-em-up sub simulator; what a combination!

• Terror of the Deep Controls
Keyboard or joystick may be used.

CURSOR KEYS	Move hands
SPACE	Fire
P	Pause
Q	Quit

Tape Trouble?

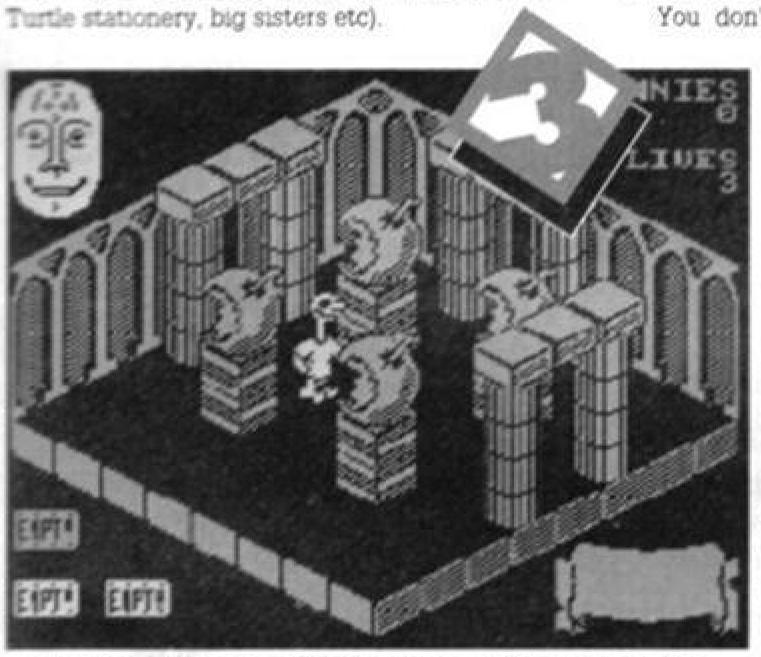
We hope that your covertape will load first time. However, having worked with computers for as long as we have, we know that things don't always go like clockwork. If you have problems loading the tape, try the following:

- Try loading at several different volume levels if you're using an external tape recorder. Computers can be very fussy about the volume they will load at.
- Clean the tape heads. This can be done with any commercially available cleaning kit. Alternatively, use a cotton bud soaked in alcohol. Gently rub the surface of the heads and pinch roller to remove that layer of accumulated grime.
- Adjust the cassette recorder's head alignment. The alignment screw is located just to the left of the tape head, and is usually accessible through a small hole. Rotate it a fraction at a time with a jeweller's screwdriver. When the crispest sound is heard, the alignment is spot on.
- Sometimes the tape spools can jam or stick at a critical moment. Check the spools in your cassette rotate freely, if necessary giving the casing a slight tap against a table edge just to make sure. If, after trying the all of the above, you still can't get the tape to load then you can return it for a replacement. Send the tape, along with an SAE to:

AA73 Covertape Returns, Ablex Audio Video Ltd, Harcourt, Halesford 14, Telford, Shropshire TF7 4QD.

SWEEVO'S WORLD

When we put *Hydrofool* on the cover tape a few months ago, hundreds of you wrote in to say that you thought it was the best game you'd ever played. Many of you sent us gifts to show your gratitude (bags of sweets, Hero Turtle stationery, big sisters etc).



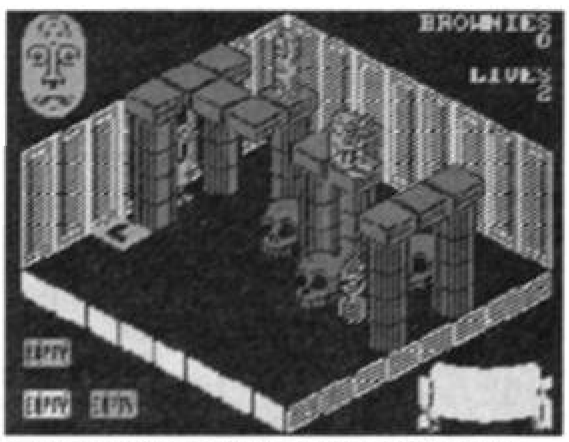
• If Bill has six apples, Pete has three apples, Neil has ten apples and Sweevo has four apples... er, maybe we should wander through one of these three archways.

This month we bring you the prequel, *Sweevo's World*, which is every bit as infuriatingly addictive as its offspring. This time round, though, we've compiled a list so you know exactly what to send us by way of thanks. We like Extra Strong Mints, Marmite crisps, pencils with rubbers on the end, and tall blondes called Rachel. Cheers.

You don't really want to know about the game as well, do you? Oh all right then. SWEEVO stands for Self-Willed Extreme Environment Vocational Organism. Bet you wished you hadn't asked now? (*We didn't – the readers.*) Your job is to try and eliminate all the other creatures in the Folly (the complex you wander round). There's lifts to travel up, holes to fall down, and all manner of nasty traps and lethal fruit to try and avoid.

Your energy is shown by the expression on the face at the top left of the screen, you can carry up to three objects at a time. Scaring the goose from behind will give you extra energy. (Don't ask us – we just write the reviews!)

Sweevo's World is a tricky game, which requires a lot of thought and patience to progress in. There's a big enough playing area to keep you at it for ages. Once you get over the initial pulling hair out and screaming 'it can't be done' syndrome, that is. All in all, one heck of a challenge.



• The L-plate's a lift, the sulky bloke's a leprechaun, the finger would certainly surprise any passing nuns, and we're nearly dead.

• Sweevo's World Controls
Keyboard or joystick may be used.

QWERT	Up Left
YUIOP	Up Right
ASDFG	Down Left
HJKL ENTER	Down Right
BOTTOM ROW	Pick Up, Drop, Boo

DISK DRIVE OWNERS READ THIS!

If you have a disk drive, you'll no doubt find the prospect of loading everything from tape daunting. Thanks to our special tape to disk transfer program, you'll only ever have to load from the tape once – all programs are transferred easily to disk.

Insert a blank formatted disk into the drive and the covertape at the start of side one into your cassette player. Connect the REM socket if you have one (6128 owners) – it'll automatically stop the tape in the right places when accessing the disk drive.

Load the menu program in the normal way and select the TRANSFER TO DISK option. Follow the on-screen instructions and press a key when the computer asks you to. It's as simple as that!

Should you experience problems you'll be asked to rewind the tape and try again. Don't panic if this happens – follow the advice for tape loading troubles.

DISK OFFER

All the programs on the *Amstrad Action* covertape are easily transferable to disk. However, owners of the 6128 Plus are unable to connect a cassette recorder to their machines, and some of the rest of you may experience loading difficulties.

We've come to a special arrangement with our duplicators. For a small charge to cover costs, they will supply a disk containing all the programs we're giving away on the tape. If you would like a copy on disk, simply send them your name and address along with a cheque/postal order for £2.00 made payable to Ablex Audio Video Ltd. Send your orders to:

AA74 disk offer,
Ablex Audio Video Ltd., Harcourt, Halesford 14, Telford, Shropshire TF7 4QD.

You may also order previous covertapes from issues 67 onwards – just make sure that your envelope is clearly marked with the issue number of the covertape you require.

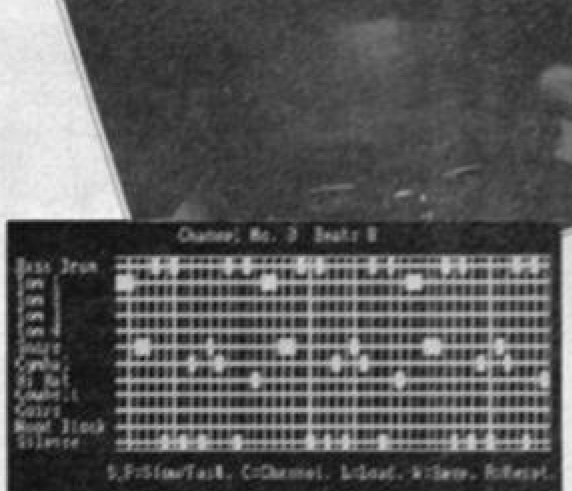
DRUMKIT

Yo pop kids, you're looking for sounds,
Well this free prog's got the best around.
Toms, Toms, Bass Drums and Blocks
Don't get cold feet, it'll knock off your socks.
Amstrad girls, yo, Amstrad boys
Here's three channels, it's a wall of noise.
Fast, slow. Slow, slow, fast.
Turn it up, it's such a blast.
Hey (it's the music of life)...

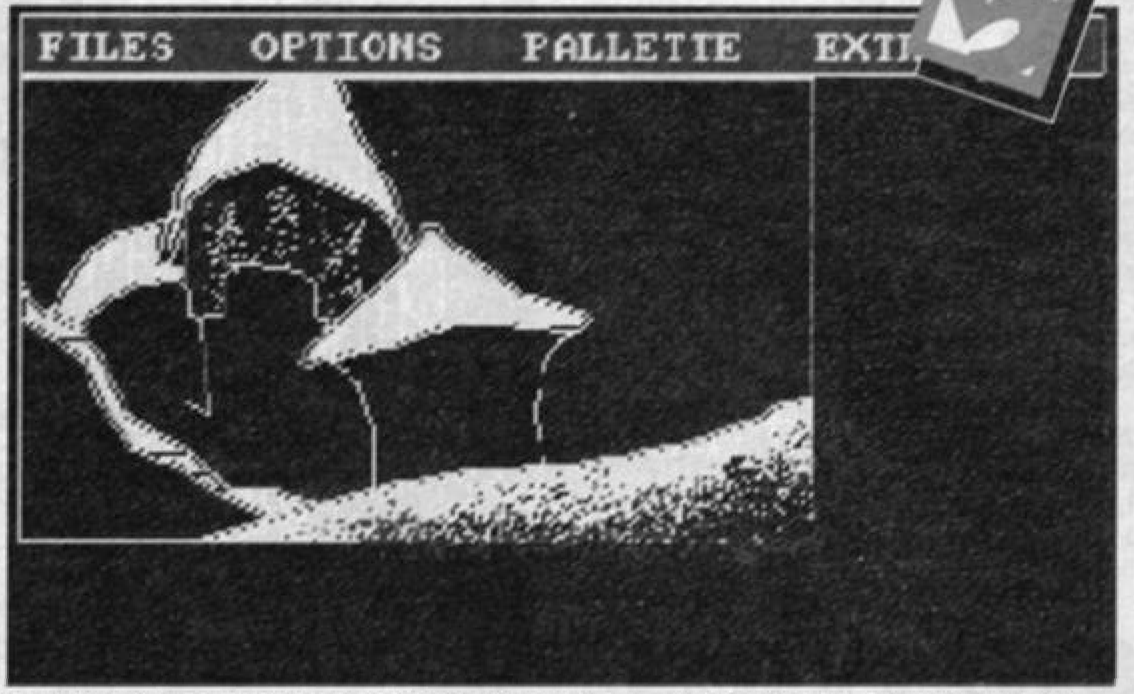
It's easy to use, it's easy to please,
Just get your hands on those cursor keys.
Move it up, move it down, move it all around.
Place those blobs to make those sounds.
You can save, load, overload
Give it hell with a big payload
Give it some love, give it respect
If it gets too much you can just reset.
Hey (it's the music of life)...

If you're on your own, or you're in a band
Here comes that helping hand
You got eleven sounds, forty-eight steps
More good vibes than you could ever expect.
Shake it to the left, shake it to the right
Play it loud right through the night.
Keep it safe, keep it sound. Keep it clean
Yo get down, it's a drum machine.
Hey (it's the music of life)...





● Hey, it's just one short step from fiddling around with a CPC to looking moody in a music mag. Possibly.



● AA's covertape art package. It's comprehensive, it's user-friendly, it's great fun, and it's, er, smart too (geddit). Above we see one of author Richard Buckley's efforts. It's a sort of fantasy landscape. Kind of like something from *Lord of the Rings*. Or something.

SMART 2

You just would not be-lei-ve the blood, sweat, tears and hot chocolate that went into getting this fab art package on the covertape.

First of all, we couldn't find a copy of the original tape it was on (*AA37*), then the copy that someone sent us disappeared in the post. As the deadline approached, Rodders took it upon himself to type in the whole listing of the original *Type-ins* version (*Smart*). Alas, even after a whole afternoon's typing and debugging it still wouldn't work.

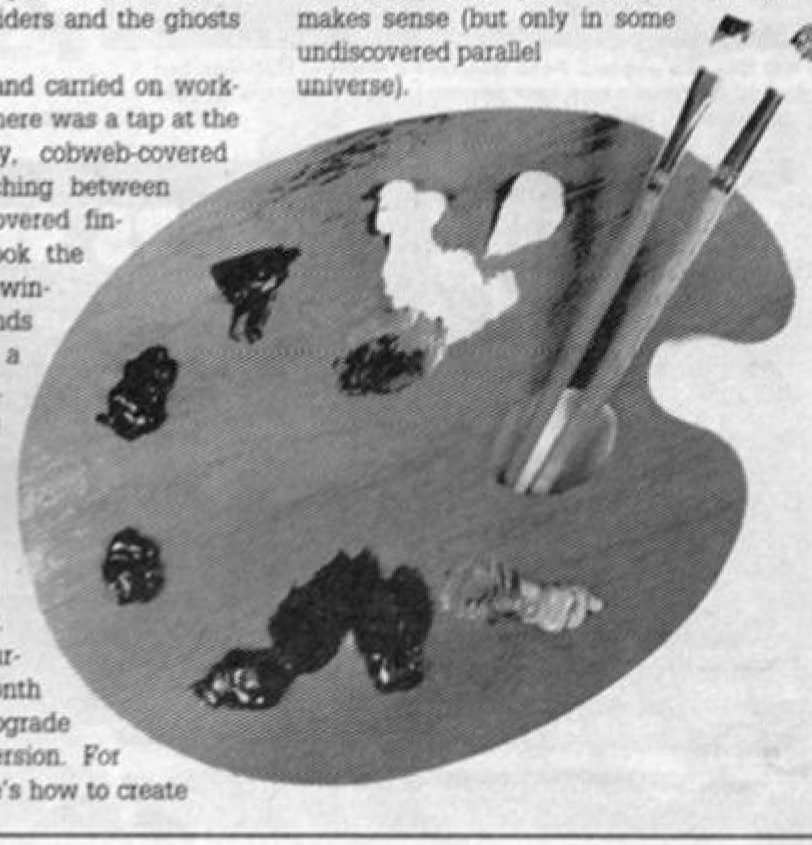
The whole escapade finally came to a reasonably satisfactory conclusion when Adam decided to venture down to the cellar – a dank, dark, creepy underground room, full of old disks, tapes, rats, spiders and the ghosts of former *AA* staff.

We locked the door and carried on working. A few hours later there was a tap at the window and a pasty, cobweb-covered hand appeared, clutching between its grubby earwig-covered fingers a disk. We took the disk and closed the window. A few seconds later there was a massive crashing sound. Oh dear, we're on the third floor. Never mind...

The tape turned out to be the original disk the writer (one Robert Buckley from Kidbrooke) had sent in to *Type-ins*. This is the early four-colour version. Next month we'll tell you how to upgrade to the sixteen-colour version. For the moment though, here's how to create that masterpiece in black, white, red and blue...

Everything is controlled through pull-down menus and an arrow cursor. It's a joystick-only prog. You get lines, boxes, circles, other shapes, a spray can, fills, erase, a zoom-editing facility, x-swap, y-swap, block thingies... everything a young boy (or girl) could need.

You can knock up some pretty snazzy black and white pics, solar system maps and all sorts. And if you reckon you've created a meisterwerk, why not send it (on disk or tape) to *Art Gallery* at the usual address. You could win, er, a prize of some sort. *Amstrad Action* - where every day is a party, and every party is full of depressed accountants. You know it makes sense (but only in some undiscovered parallel universe).



PROTYPE – THE RETURN OF ARNOR!

Did you think Arnor had developed their last CPC product?

We must admit, it was starting to look that way. But now we are pleased to announce a stunning new arrival - *Protype*. This provides *Protext* with the improved printing features that many of you have requested.

We honestly believe that it is not possible to achieve better quality output from a 9 pin printer than with *Protype*. Just look at the examples below - all printed on an elderly Amstrad DMP 2000!

Protype costs just £30 and is available on disc only. It works with *Protext* ROM and disc versions and may also be used as a stand alone program.

5 years after its original release Protext remains indisputably the leading CPC word processor. In the February 1991 issue, AMSTRAD ACTION said:

"Without doubt the most complete word processor available for the CPC ... Protext is very much a professional quality program."

AMSTRAD ACTION speed tests show Protext to be many times faster than other programs, for example:

Replace operation		Delete 17k block	
Program A	- 94 secs	*Program A*	- 17 secs
Program B	- 74 secs	*Program B*	- 15 secs
Protext	- 5 secs	*Protext*	- 1 sec

Prices

Protype	£30	(disc, Protext not required)
Protext + Protype	£45	(disc)
Rombo ROM box	£20	(when at least one ROM is purchased)

ROM prices

Protext	£25	Promerge Plus	£20
Maxam	£25	Utopia	£20
Prospell	£20	Maxam 1½	£20
		BCPL	£20

Liquid^{293K}	c_p/J kg^{-1} K^{-1}
① Acetic acid ($C_2H_4O_2$)	$1{\cdot}96 \times 10^3$
② Acetone (C_3H_6O)	$2{\cdot}21 \times 10^3$
③ Water$_{sea}$ (H_2O, salts)	$3{\cdot}90 \times 10^3$

Protype is a typesetting print enhancer designed to squeeze maximum quality from low-cost 9 and 24-pin dot matrix printers. This paragraph shows how **Protype** can work to a right-hand margin.

A **Ganga común, «*Pterocles alchata*»**, 38cm
♀ con tres bandas en el pecho †
♂ faja pectoral castaña ‡

supports over 40 European languages including:

Anglo-Saxon	þ ð æ œ ā ē ī ō ū ǣ œ̄
Czech	á č ď é ě í ň ó ř š ť ú ů ý ž
Latvian	ā č ē ģ ī ķ ļ ņ š ū ž
Polish	ą ć ę ł ń ó ś ź ż
Turkish	á â ç ğ ı î ö ş ü

B just some of the non-ASCII symbols:
« » „ " " ¡ ¿ 1º 2ª ¶ §
© £ ¥ ¤ ¢ ♭ ± ÷ × ↓ °
← → ♯ ♭ ß ð Đ þ Þ ø θ
å Å æ Æ œ Œ ł Ł đ ħ Ħ
←*line graphics too*→

This actual-size printout was produced in one operation on a 9-pin printer using Arnor's Protext and **Protype**.

Protype (disc only) works on:
○ Amstrad CPC6128 [+]
○ **CPC664 & 64K expansion**
○ **CPC464 & 64K expansion & disc drive**
Uses less than 350 bytes of the main 64K.

PROTYPE IS VERSATILE:

- *multiple diacritics (accents) with any letter* (ẹ̀ ṇ̄̄ s̈ Ặ)
- *tabulates proportional text / micro-justifies spaces*
- **240 DPI × 216 DPI** *resolution on a 9-pin printer!*
- *works with all 9-pin or 24-pin Epson-compatible printers*
- *use from Protext, Basic or machine code*
- *includes the seven fonts used in this demonstration*
- *choice of character designs within a font* (page or page)
- mirror imaging of a line of text!
- ^{super}*script*, $_{sub}$ *script*, underline, b box, ⓔ encircle
- *kerning (spacing of 'difficult' character pairs* (AV)

Fæder ūre, þū þe eart on heofonum	(Old English)
Ár n-atheir, atá ar nèamh	(Irish Gaelic)
Fader vår som är i himmelen	(Swedish)
Svargayehi vädasitina apagê piyâṇeni	(Sinhalese)
Teve mūsų, kurs es danguje	(Lithuanian)
Pater noster, qui es in cælis	(Latin)

Releasing your micro's potential...

ARNOR

Arnor Ltd (AA), 611 Lincoln Road, Peterborough PE1 3HA. Tel: 0733 68909 (24 hr) Fax: 0733 67299

All prices include VAT, postage and packing. Credit card orders will be despatched by return of post. If paying by cheque please allow 10-14 days for delivery.

Reaction

Amstrad Action's letters pages are edited by the mag's newest recruit, Adam Peters. "He's so sharp he'll cut himself one day," as Auntie Flo used to say before that nasty business with the vicar.

But before you put pen to paper, make sure you've read the following:

- **Got technical problems? You should be writing to *Forum*, not *Reaction*.**
- **Stuck on the basics and need help? That's what *Ask Alex* is for.**
- **Keep your letters short, and try to make just one point rather than loads**
- **Looking for a particular cheat or poke? You need *Cheat Mode!***
- **Don't enclose SAEs or ask for individual replies – there's no way we have the time for that.**

What should you write about? Anything remotely connected with Amstrad computing! We give away £25 mail order vouchers for the best letters and badges for the angriest...

Write to:

Reaction, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW

AA is fab, says Lynne

I bought my eleven year old son an Amstrad 6128 three years ago, and he has played the games that were supplied with it over and over again. I had managed to find the *Mini Office 2* disk in Smiths, purely by chance, and have been using it too. We were getting to the stage where my son wanted some new games, and I wanted a better word processor and art package as I have gone back to college.

I was very nearly tempted to sell this machine and buy an Amiga, because none of the local shops sell disks for this machine! I know the main computer shop would probably be able to order one, but I did not know what I wanted. I started looking at the computer magazines at the newsagent, and by chance found this magazine two months ago.

Your magazine has made all the difference. No longer have we a machine that is obsolete, but having read it avidly I now have a *Brunword* word processor, have ordered *Stop Press* and a mouse and the *Advanced Art Studio*, and can't wait to use them. Also, my son has some new games to play with the free tapes.





● *Stop Press* and *Advanced Art Studio* – Lynne Brazier can't wait to get hold of them – and it's all because of *Amstrad Action*!

I think your magazine is really great. It has

BYTE SIZE

Blackbeard & Co.

I enclose a tape program to remind readers of the importance of software piracy. It is against the law and should not be done.

David Hornsby
Redditch, Worcs

Adam: We thought the program was excellent David, and we've made several hundred copies of it and distributed it to all our friends (and some people we passed in the street). You're not related to Bob Hay at all are you?

Cheeky blighter

You probably get tons of letters like this (*oh no we don't*). Me and my mates have started up a computer magazine, and we have called it *Your Format*. It is for various machines, and in particular the Amstrad. The main question is are we allowed to copy some of your mega brill reviews in our own words, and if so should we put your name in the magazine?

Lee Parkin
Bristol

Adam: No, you cannot nick our reviews Lee, you sassy person you. It takes hours, nay minutes, of hard slog to produce those top Amstrad reviews that are loved and cherished by whole generations. Nick a single semi-colon and we'll sue your bottom off so fast you won't even have time to pop into the sweet shop for a packet of Chewits on your way to the prison cell. (Then again, rewrite the reviews so they're totally different to the originals, and keep quiet about it, and you might get away with it.)

Quest for pedantry

In *AA71* at the top of the verdict box on the *Hero Quest* review it says 'Hero Queat'. I thought Gremlin made a very good game called *Hero Quest*. So is it me or you?! (*Sorry, what was the question?*) My friend's Speccy mag gets two cover tapes, so can we!

Macc Lee
Devon

Adam: You want two cover tapes Macc? No problem, just buy two copies of the magazine. (Do you think we're made of money?) What sort of a name is Macc anyway? Go away.

Oi you, you're crap!

You lot at *AA* don't have any brains, your magazine is falling terribly and the cover tape was crap. All the reviews are falling terribly (why do you review ultra crap games eh?). Me and lots of other Amstrad users find it crap. Maybe it's time you had a proper complaint. Maybe you'll be scared to print this. £2.50 is not worth it. I have bought an Amiga. Ha ha ha.

D Shearer
Caithness, Scotland

just about the right mix to make it helpful to both the beginner like myself and the more advanced computer buff! I really don't understand all the terminology though, but I am not going to give it up yet! Keep it up...

Lynne Brazier
Shoeburyness, Essex

Adam: A heart-warming story, Lynne. We're sending you the £25 voucher for a number of reasons; partly because you said lots of nice things about us (which is quite rare in these pages); partly because your story will strike a chord with thousands of other readers; but mainly because 'Shoeburyness' is our favourite English place name.

Is Barone bonkers?

Has anyone actually thought about that which a computer does for a person? I don't mean the negative aspects such as eye strain or even potential myopia caused by excessive (and careless) use of the machine, but the subtler improvements to one's mental state which come from utilising a computer in the proper fashion.

I must stress 'mental' state – there are, as far as I can see, no physical benefits to be gained from remaining in a sedentary position for any length of time. Perhaps if I were really desperate, I would suggest that playing an athletics game or football simulation could prompt a desire to experience the real thing.

Setting aside the obvious advantages to be obtained from using educational software in order to improve one's mental awareness of facts or figures, I am referring specifically to games playing. There are three main aspects which can only be beneficial to one's being, which I list in reverse order of effectiveness; peace of mind, logic/reasoning, and reflex.

Primarily, reflex. I would challenge anyone to refute the suggestion that playing games on a computer (or anywhere else for that matter, but a computer is the medium for my purposes) improves one's reflexes. It increases one's awareness of what is going on and the ability to react to it in any situation – it is not just confined to the computer screen. And it improves co-ordination between hand and eye, much like playing table tennis, for example.



● We are pleased to welcome P Barone, who will today deliver a lecture on the Paraneural Implications of Non Product-Related Computer Utilisation.

I am aware that whilst no-one may be able to contradict me on this, there is also nobody who would go to any trouble to prove it – I can only leave it to the individual to recognise an effect, an effect which is very difficult to notice. I realise that people are by nature slower or quicker to react to things, but I am sure it helps. More so, however, in a younger person; I think the "effect" (for want of a more suitable word) is maximised if someone enters the world of computers and games at an early age, so that various reactions are "learnt" while s/he is developing, and minimised in anyone over the age of, say, twenty.

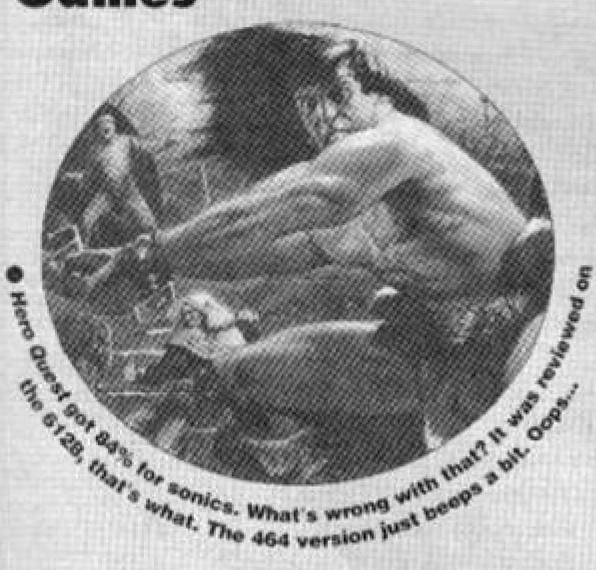
Secondarily, logic/reasoning. Everyone knows that minds and brains must be in constant use in order to prevent deterioration of thought. Obviously, using software is not going to instil an IQ of 180 into someone or allow one to think clearly who has not previously done so. But what is there will be improved.

To give a facile example, if there is a locked door in one room and a key in another, what leads us to bring the latter to the former? Logic. And it is this logic and reasoning (and memory also, come to that) which should be used again and again, so that one can step with greater ease from the fundamental and puerile use of logic given above to more complicated ideas.

This point is important, only less marked than the first because there has to be a firmer

Adam: Any readers who'd like to help me and Rod duff this bloke up, write to AA Vigilante Squad at the usual address.

Silence of the Games



● Hero Quest got 84% for sonics. What's wrong with that? It was reviewed on the 6128, that's what. The 464 version just beeps a bit. Oops...

I have recently read the review of *Hero Quest*. I think it is great, apart from two things. The first is about sonics; you lot gave it 84%, but both my demo and complete game have no sound apart from a slight beep. Secondly, none of my games (*Hero Quest*) have any pictures round the border, as shown in your screen shots. Is it my computer or games that are broken, or are you using a different computer for your reviews?

Ian Hales
Livingston, Scotland

Adam: I've just put on my Mystic Martin psychic ear-muffs. Aaaaahh. Ooooohh. Eeeeeee. You... have... a... 464. Most modern games really push the boundaries of the 64K memory, and a lot of programmers now include certain features (such as in-game tunes and frilly borders) which are only initialised if the software detects that the machine being used is a 6128 (and therefore has an extra 64K memory bank in which to store stuff). We must have reviewed Hero Queat using a 6128.

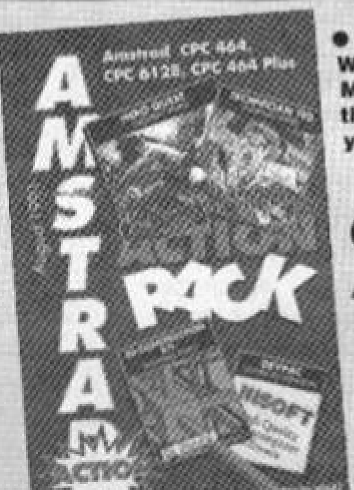
Attack of the Killer Covertapes

I am writing to complain about issue 71 of *Amstrad Action (oh God, here we go...)*.

I went down to the local shop to get my *Amstrad Action*. When I got back home I loaded the games that came on the cover cassette to find out that they would only work once. So I took the tape back and got another one to find out that this one would not work at all! So again I went back to my local shop and asked if they could phone up and ask what is wrong. I have only found out today that the cassette I got free passed a virus on into my computer and it does not work any more. I am very upset now and...

Philip Ridgeon
Bournemouth

Adam: Er, we have to admit we're foxed by this one Phil. None of our other readers have caught anything nasty off our cover tape and we find it hard to believe it's happened. Are you sure you didn't do something else to upset your machine. Like attacking it with an axe, or dropping it from the top of a tall building, for example?



● A virus on the covertape? What a load of c*bblers! Moral: don't believe everything your newsagent tells you...

Crimewatch AA

It looks like you've been had again! *Thro' the Wall* in *AA71* is also straight from the Amstrad manual, except sneaky Stuart has changed the name from *Bustout*, its original title. It makes me so angry to think that someone has made another twenty quid just like that!

Alex Banks
Crapstone, Devon

Whoops, Stuart!

According to *AA71* page 61, I have won a £20 voucher for *Thro' the Wall*. As I have not received this yet, could you please check for me.

Stuart Gilmour
Lanarkshire, Scotland

Adam: Oh dear. Oh dear, oh dear, oh dear. Thanks to all the other Neighbourhood Watchers who rang or wrote to let us know about those naughty Scotch listing thieves. And put your minds at rest folks. The way our admin works, no-one gets paid for type-ins until a few weeks after the issue comes out. Let's just say Stuart'll be wasting his time if he's waiting for postie with his nose pressed up against the window.

ANGRY LETTER OF THE MONTH

I suppose you think you're doing a good job with your mag here? Well you are, but you aren't, but I said you are so you must be. (*What on earth is he going on about?*) Anyway, I have a few things to point out:



1) Why do you release the magazine two weeks before the month it is being published for? I am sure it would be no problem to release it on the first of the month.
2 Thanks for getting my Cruiser to me intact (two days late).
3) Please can I have my disk back, ie NOW. I mean, I did send a stamped addressed sticker to go on the box. The disc is a CF2 type.
4) I bet that you (who is reading this letter) will promptly chuck this in the bin. 'Cos you're a secretary who enjoys doing things like that. DON'T.

Michael Westmacott
Bristol

Adam: All right, so Michael's letter isn't exactly angry, more kind of moany, and a bit of a let down after last month's savage attack from his namesake in Swansea. However, we feel Grumpy of Bristol's missive justifies scraping this month's award purely for being the most pointless tissue of complaints we've received in a long while (and that's a lot of tissues, folks).

Take Michael on a luxury holiday to Florida and he'd be complaining about the colour of the sea. ("Why's the sea always blue? Why can't it be orange? And can't you get the tide to come in quicker?") Not that we're going to take you on holiday to Florida though Mickey boy. Oh no, it's something much better than that. We're going to send you an exclusive badge featuring fellow moaner Morrissey. Well, it's not really that exclusive to be honest... I suppose you'll write to complain about the pin being too shiny.

Do YOU, dear reader, think you could be angrier than last month's winner or more whingeing than this month's? It's a tall order we know. Still, drop us a line here at Reaction and you never know your luck.

Michael fought off some pretty stiff competition this month, particularly from Paul Thompson of Bakewell in Derbyshire. Aside from slagging off a couple of Reaction letter-writers and pointing out several spelling mistakes in AA, Paul went on to accuse Codemasters of various crimes against humanity. There's no prizes for being second Paul, but we've sent your name and address to Codemasters, so maybe they'll send you a little something. Ha ha ha ha....

basis there already to build on. If one is not so inclined, then one will automatically – maybe even subconsciously – choose a game where less thinking is involved, such as a shoot-em-up, rather than (to go to extremes) a strategy game.

I suppose that the same idea could be applied to the 'reflex' paragraphs, but there are many more games that involve some sort of quick reaction (and many more people who play them) and even the most ardent strategists must surely have a couple.

Finally, an idea which I wrote about and had printed in *AA37* (under a pseudonym, incidentally) and one which I still adhere to strongly. I firmly believe that the computer is an escape from reality for games players and allows those with troubles to forget them for an hour or so by playing games. It is this sort of thing which is done unknowingly but which, if analysed, is perfectly clear, for me at least.

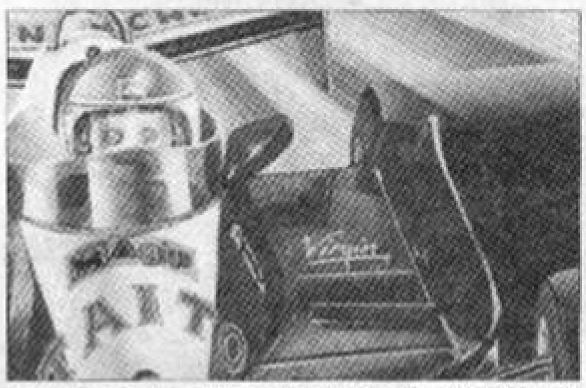
Anyway, as I always find when I write about something I believe in, I have gone on far too long, and I beg your pardon for that. Am I imagining all this? Someone tell me that I am not completely crackers.

P Barone
Latimer, Bucks

Adam: I'm not saying anything.

More gratuitous praise

I have had my CPC 464 since way back in January 1985 and I have been reading your mag since November 1990. Until I bought your mag my computer was sitting in my room with dust gathering on it. Since then I have bought many things for my computer such as a Star LC-200 colour printer (which I would recommend to anyone who is thinking of buying a printer). I have also bought many games such as *Laser Squad, Rick Dangerous 2, Hero Quest, Continental Circus*, and many more, so I think people should stop giving *AA* flak and say "well done *AA*".



• David Gaughran reckonds *Continental Circus* is too easy! What a thing to say about one of the finest racing games ever...

1) What is the best art package for my tape-driven non-upgraded 464?
2) I think you have got the balance just right between serious and games.
3) Please, please bring back *Buyers' Guide*.
4) I would tend to agree that some games highly rated by *AA* are too easy. I finished *Hero Quest* (all scenarios) in less than a week. On my first game of *Continental Circus* I finished the first five tracks, and on *Vindicators* I got to the ninth station in one-player mode on my first go, and I'm not a brilliant games player. But games like *Rick Dangerous 2* and *Switchblade* have got the difficulty just right.
5) The cover tapes are brilliant, keep it up.
6) I think the best *AA* covers are like 63, 70 and 71.
7) *Ask Alex* is brilliant for us BASIC thickies.

David Gaughran
Malahide, Co Dublin

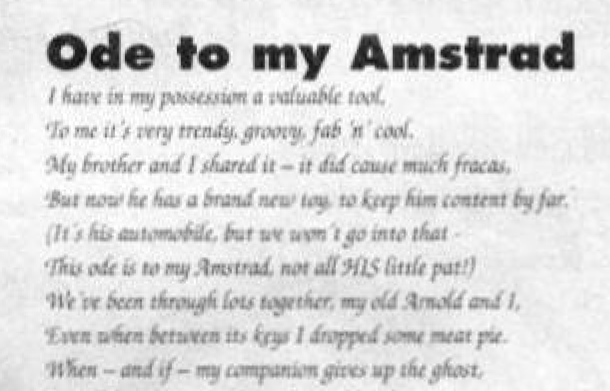
Adam: 1) What you need is a copy of Smart 2, first featured on the AA37 covertape...
2) Cheers.
3) Oh, all right then. Take a look at page 62...
4) Ah, but what's goose for the duck is rabid Dobermann for the duckling.
5) Cheers again.
6) Latest scores from the AA mail-box; comic-like covers... 63%, serious-style covers... 37%.
7) It was an idea suggested by a reader. Just remember pop pickers, AA is YOUR mag, so keep those ideas and opinions coming.

Ode to my Amstrad

I have in my possession a valuable tool,
To me it's very trendy, groovy, fab 'n' cool.
My brother and I shared it – it did cause much fracas,
But now he has a brand new toy, to keep him content by far.
(It's his automobile, but we won't go into that -
This ode is to my Amstrad, not all HIS little pat!)
We've been through lots together, my old Arnold and I,
Even when between its keys I dropped some meat pie.
When – and if – my companion gives up the ghost,
It will be a poignant day, a lot sadder than most.
That day will signify the end of our relationship;
No more programs for it to store in its delicate chips.
So thank you good Amstrad, for serving me so well.
I hope you continue to be reliant as hell!

T Jones
Darlington

Adam:
To be honest Jonesie, your ode doesn't scan.
And the syntax is all wrong too, man.
We'd lost our way by about line five.
The bit about meat pies was rather contrived.
Still, we can't really diss your letter,
As you can see, we can't do any better.
You're clearly a scholar, and certainly no sloucher.
Don't write any more mate, here's a fab free voucher. **AA**



• If Shakespeare was alive today he'd turn in his grave.

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CRASH CRASHES, ZZAP ZAPPED!

Veteran 8-bit titles chopped as receivers called in

The computer games industry has been stunned by news of the collapse of two leading 8-bit titles. Veteran magazines *Crash* and *Zzap!64* were both published by Ludlow-based Newsfield, which called in the receivers on the 16th of September. It seems the company simply realised it was no longer solvent and was unable to continue trading.

Newsfield also published console magazine *Raze*, strategy title *Games Master International*, *Prepress* (a professional desktop publishing magazine) and *Fear*. At the moment it's not clear whether any other publishers are likely to take over the Newsfield titles.



● Veteran games mags *Crash* and *Zzap!* have ceased publication as Newsfield goes into liquidation.

There are no direct ramifications for *Amstrad Action* in all of this, since *Crash* covered Speccy games and *Zzap!* dealt solely with the Commodore 64. But the failure of the magazines does inevitably fuel talk that the 8-bit market is declining. Note that industry pundits have been saying that since 1985...

AA's sister mags *Your Sinclair* and *Commodore Format* are expecting to pick up a few readers following Newsfield's collapse – but there's more than a tinge of sadness in the news, even for them.

"...we're terribly sorry and we'll miss them something rotten," says Andy Hutchinson, *Your Sinclair's* editor.

"...if it wasn't for the fact I edit *Commodore Format*, I'd be saddened by the news," explains Steve Jarratt. "As it is, though, it's got to be good news for us!" **AA**

AMIGA presents World of Commodore 15 - 17 November 1991

MAKE A NOTE IN YOUR DIARY...

Disappointed about the cancellation of the European Computer Entertainment Show in September? Never fear – Future Publishing's very own show will be opening its doors on the 15th November at London's Earls Court 2. The full story is in this month's *Grapevine* section on page 18...

Beastly add-ons...

Is your computer a miserable, unfriendly, ugly piece of work? You can put a human (well, animal, then) face on your micro with a "Critter". The Critter family consists of a teddy bear, dragon, bunny rabbit and bulldog – choose whichever one suits your mood and your machine. Bits of velcro keep the Critters' limbs stuck to your machine, which means that if you ever upgrade you can keep your beloved Critter.

Critters cost £24.99, plus £2 post and packing, and are available from: **Crittercal Computers Ltd, PO Box 300A, Surbiton, Surrey KT6 5YA.**



● Cheer up your computer with a 'Critter' from Crittercal Ltd. (Yes, we know, PCWs need all the cheering up they can get...)

SNIPPETS...

Bust that jargon!

If you're baffled by binary, confused by compiling and utterly dumbfounded by databases, you should look out for a new book from Chartwell-Bratt. *The Concise Dictionary of Computing & Information Technology* is a bit of a mouthful, but it promises "concise and easily understood explanations of over 4,000 of the most common words, terms, jargon, acronyms, abbreviations and codes".

The Concise Dictionary of Computing should be appearing in the shops now. The price is £9.95 and the ISBN number is 0-86238-268-8.

Computing at the Ideal Home Exhibition!

Just in case you find yourself being dragged round the Ideal Home Exhibition next spring, admiring all those Patagonian rugs and Laura Ashley curtains, you may be interested to know there's also going to be a Computing Show! The chances of there being anything CPC-specific there are virtually zero, but it'll still make a change from the usual crop of rather iffy and decidedly expensive household bits and bobs.

More fun at school?

Scant months after *Fun School 3* appeared on the CPC, publisher Database is planning *Fun School 4*! It's going to follow the same formula as its predecessors, with three separate packs aimed at the under-5s, the 5-7s and the over-7s. Each program will have six sub-games teaching various different skills to your eager pupils.

There is one difference, though. Robbie the Robot has been scrapped. Yes, 'fraid so. The metallic mechanoid has been deemed to have too little streed cred, and is being replaced by Sammy the Spy.

Fun School 4 should be appearing in early November.

Studio Software

We've had a couple of readers complaining about Studio Software (which ran an ad in *AA73*). Either their orders aren't coming through or they can't get hold of the company on the phone. We'll try and keep you posted about what's happening.


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CHARTS

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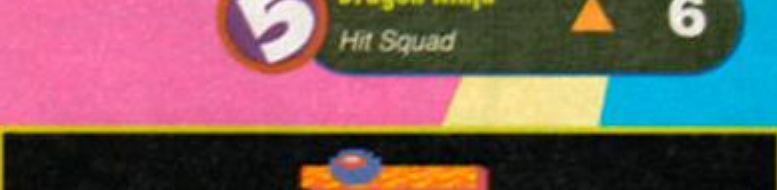
FULL-PRICE

▲ NEW ENTRY ■ NO CHANGE ▲ GOING UP ▼ GOING DOWN

Pos	Title / Publisher	Comment	Review	Movement	Last
1	**Manchester United Europe** *Krisalis*	Number One for the second week running. We're still waiting for our review copy...	Not reviewed	■	1
2	**Rainbow Collection** *Ocean*	Holding its own, despite the fact that two of the three games are in the budgie charts too.	Not reviewed	▲	4
3	**Dizzy Collection** *Codemasters*	*Dizzy's Excellent Adventures* should be out soon. Any bets on a Guns 'n' Roses double act?	Not Reviewed	■	3
4	**Hero Quest** *Gremlin Graphics*	The best-selling board game still shifting buckets across the formats.	AA71 91%	▲	5
5	**Big Box** *Beau Jolly*	Thirty mediocre games all bundled together. Who said quality matters more than quantity?	Not reviewed	▲	6
6	**Teenage Mutant Hero Turtles** *Mirrorsoft*	You can make soup out of these you know? Sometimes we wish someone would.	AA65 76%	▼	2
7	**Viz** *Virgin*	[illegible]	AA72 69%	■	7
8	**Predator 2** *Mirrorsoft*	Oh no, a nasty alien's turned up New York and Arnie's nowhere to be found. Gawk!	AA69 74%	▲	–
9	**North and South** *Infogrames*	The American Civil War (1861-5). You've written the essay, now play the game.	AA66 91%	▼	8
10	**Power Up** *Ocean*	Four stonkers and one old bonkers, it's better than a game of conkers. Er...	AA72 89%	▼	9

THE BUDGETS

Pos	Title	Publisher	Movement	Last
1	N Zealand Story	*Hit Squad*	■	1
2	Moonwalker	*Kixx*	▲	–
3	Quattro Coin-Ops	*Codemasters*	▲	–
4	Shinobi	*Mastertronic*	▼	2
5	Dragon Ninja	*Hit Squad*	▲	6
6	Bubble Bobble	*Hit Squad*	▼	3
7	Batman the Movie	*Hit Squad*	▲	–
8	Quattro Skills	*Codemasters*	▲	–
9	Cabal	*Hit Squad*	■	9
10	Magic Land Dizzy	*Codemasters*	▲	–



● *Bubble Bobble* is riding high in both the budget and full-price (*Rainbow Collection*) charts. It is a bit naff really, but still a lot of fun. Right you baddies, just you watch this...

SHOW US YOURS

Hey man, Radio AA is broadcasting loud and clear across the globe. We want your charts, pop pickers. Send us a list of your five fave raves in the world of CPC games, along with your name, address and a photo of yourself looking really stupid. In return we'll plaster it in this box and all your friends will think you're really cool. Pretty good huh? Write to: Readers' Charts, Amstrad Action, 30 Monmouth Street, Bath, Avon BA1 2BW. And hey, do it now.

ON THE GR

GOLD COMPILATIONS



● Forgotten Worlds is one of the four games on US Gold's forthcoming *Capcom Collection.*



● Turrican 2 (so soon!) is going to be on *Maximum Action Xtra* (*MAX Pack*), along with *St Dragon, SWIV* and *Nightshift.*

US Gold has got a couple of decent sounding compilations coming out for Christmas: *MAX – Maximum Action Xtra – Pack* will consist of *Turrican 2* (so soon? Yup – seems so), *St Dragon* (oh, er, lovely...), *Nightshift* (excellent game) and *SWIV* (we haven't seen this yet but James, on sister mag *Your Sinclair* says it's 'gnarly', whatever that is).

Also coming out from the Goldies for Xmas is the *Capcom Collection.* This one's a real heavyweight, boasting no fewer than eight titles: *Strider, Forgotten Worlds, UN Squadron, Dynasty Wars, Ghouls & Ghosts, Strider II, LED Storm* (crikey, that's a bit old isn't it?) and *Last Duel.*

● *MAX Pack* and *Capcom Collection* (US GOLD) are scheduled for Christmas, price £17.99 cass, £24.99 disk.

GREMLIN'S

There's a tasty-sounding Christmas compilation coming up from Gremlin shortly. *Chart Attack Volume 1* will feature *Lotus Esprit Turbo Challenge* (excellent), *Shadow of the Beast* (excellent), *Ghouls & Ghosts* (OK), *Supercars* (excellent) and *Impossamole* (well, it loads OK). *Chart Attack Volume 1* should be out by the end of October. What about *Volume 2*? Well, er, Gremlin doesn't know if there's going to be a *Volume 2* yet... it depends on how well *Volume 1* does.

Tiny tots waiting on the *Shoe People*, by the way, shouldn't have too much longer to wait – development is nearly over and with any luck at all the prog will be



● *Lotus Challenge* is just one of the games on Gremlin's *Chart Attack.*

OCEAN NEWS?



● The long-awaited *Battle Command* is still being, er, awaited, as are *The Simpsons, Robocop 3, Hudson Hawk, Toki, The Addams Family* and *Hook...*

Well, there isn't much, really – that's the trouble. We're waiting with bated breath for *Battle Command* (should be finished soon), *The Simpsons* (now that's got to be a contender for the Chrimbo number one slot), *Robocop 3* (another cart game – at least Ocean isn't giving up on the console) and *Hudson Hawk* (those who've seen the film tell us not to hold our breath).

There's bad news though. Latest news from Ocean is that *Toki* on the console will not now go ahead. Outrageous! The early version we saw looked absolutely spanking! We'll just have to try and persuade the Manchester bunch to reconsider...

Two new games are pencilled in, though (albeit not on cartridge). *The Addams Family* (based on the gruesome TV bods) and *Hook* (a Peter Pan-based game) are on their way. We'll keep you posted...

● *Battle Command* and *The Simpsons* (OCEAN) should be out any time now, price £10.99 cass, £15.99 disk.

THE FRENCH CONNECTION

While the software houses over here are grumbling over the state of the market, the French are apparently so thrilled with Amstrads that the 8-bit market over there is still booming.

One of the releases appearing over here is *Air/Sea Supremacy* – that's right, another compilation. This one consists of *Silent Service, Carrier Command, P-47 Thunderbolt* (how many compilations has that one been in now?), *Gunship* and *F-15 Strike Eagle.*

● *Air/Sea Supremacy* (UBI SOFT) will be out for Christmas, price £15.99 cass (disk version only to order).

PALACE NEWS

After announcing that it was pulling out of the Amstrad market a few months ago, following its takeover by French company Leisure Holdings, it's now tip-toeing back in.

The idea is to release a handful of French games over here. The first two titles will be *Hot Rubber* (a bike racing game) and *Sliders*

RAPEVINE...

BIG PLANS

finished by the end of October.

Other big news from Gremlin? Why, *Space Crusade*, of course! The board game is already outselling *Hero Quest* 2:1 in the shops, so the computer version should really be one to watch.

Biggest news of all, though, is Gremlin's plans for a Nigel Mansell licence in the early part of next year. It'll be an arcade-style blast in similar vein to Gold's *Super Monaco Grand Prix*. We want it now!

What about after that? What other full-price Amstrad releases has Gremlin got planned...?

None?

Oh.

Still, we've heard that one before. Anyway, the company reports great success with its budget label, GBH. Even to the point of rather regretting selling off the bulk of its back-catalogue of games...

● *Chart Attack Volume 1* (GREMLIN) will be out by the end of October, price £14.99 cass, £17.99 disk. *Space Crusade* (GREMLIN) will be out for Christmas, price £10.99 cass, £15.99 disk



● Total tactical control under, on and above the waves, in Ubi Soft's *Air/Sea Supremacy* compilation, out soon...

("a futuristic sports sim with magnetic balls"). Progress on those is uncertain – in fact the whole thing is uncertain at the moment – but all being well we should be seeing some nifty French imports from Palace in the future.

● *Hot Rubber* and *Slider* (PALACE) should be out for Christmas, price to be announced.

DIZZY'S CHRISTMAS PRESENT

Gawd knows how many copies of *Dizzy* games have been sold since the egg-head first appeared. Whatever the number, it looks like it's going to get even larger this Christmas.

Why? Because the Codies are turning out another *Dizzy* collection – *Dizzy's Excellent Adventures*. This one will consist of two existing titles and three entirely new ones:

● *Panic Dizzy* is an arcade puzzler rather than the traditional adventure. It's not bad, but no great shakes either.

● *Fast Food* is another re-release.

● *Spellbound Dizzy* is a completely new game, and the mainstay, really, of the compilation. With over 90 rooms, it's pretty big, too. Well, let's face it, it's *damned* big. It should also be turning up as a stand-alone release later on, too.

● *Dizzy, Prince of the Yolk Folk* is a much smaller effort of only 30 or so rooms. We've taken a look, though, and it's up to the usual high *Dizzy* standards.



● *Dizzy, Prince of the Yolk Folk*: One of the games on the Codies' forthcoming compilation *Dizzy's Excellent Adventures*.

● The last game will either be *Bubble Dizzy* or *Dizzy down the Rapids* – it's not been decided yet. In *Bubble Dizzy*, our hero has just been forced to walk the plank, and he must get to safety by leaping upwards from bubble to bubble, avoiding nasties on the way. Apparently, it's based on a sub-level from the Nintendo *Dizzy* game only available in the States, but it's been beefed up here to be a playable game in its own right. *Dizzy Down the Rapids* is an arcade game along the same lines as Domark's *Toobin'*.

● *Dizzy's Excellent Adventures* (CODEMASTERS) will be out for Christmas, price £9.99 cass.

THE COMPUTER ENTERTAINMENT EVENT OF THE YEAR...

Well, it would have been the *European Computer Entertainment Show*, wouldn't it, only that didn't happen. Sorry to all those folks who went along following the story in *Amscene*, by the way, only to get turned away. We got the news far too late to let you know – the cancellation of the public side really was at the last minute.

Anyway, never mind about all that. The point is that Future Publishing is organising its own show this year. It's taking place at *Earls Court II* between the 15th and 17th of November, and will be called *World of Commodore*...



● Fed up at missing out on the European Computer Entertainment Show, cancelled at the last minute by EMAP? Never fear! Take yourselves along to Future's very own World of Commodore Show – there's *loads* of non-Commodore stuff there too.

DON'T STOP READING! Although the show's based around these weird Commodore beasts, there's going to be plenty of other stuff there:

● On Domark's stand you'll be able to look at *Trivial Pursuit* running on one of these new CDTV jobbies.

● Mirrorsoft will have a *Turtles* coin-op machine set to give free plays, and will be running free draws for T-shirts and books.

● Jimmy White's going to be at the show, publicising Virgin's snooker sim (not on the Amstrad... grrr).

● Gremlin will have a giant four-player console, and will be running driving competitions, the action being displayed on a giant video screen above the competitors' heads. You could win a CDTV...

● Got some Christmas shopping to do? Then visit the Christmas Shopping Mall – loads of bargains will be on offer from dozens of suppliers.

● How long a play do you get in the arcades for 50p? A couple of minutes at the most? Twice that if you're really hot? Well then how about fifteen minutes – that's how long you'll get in the Games Arcade, playing whatever game you want. All the money goes to children's charities, so it's in a good cause too!

● The *World of Commodore* Show will take place at Earl's Court II, November 15th-17th. Admission £6 adults, £4 under-14s (save money by buying tickets in advance – see the ad on page 37).



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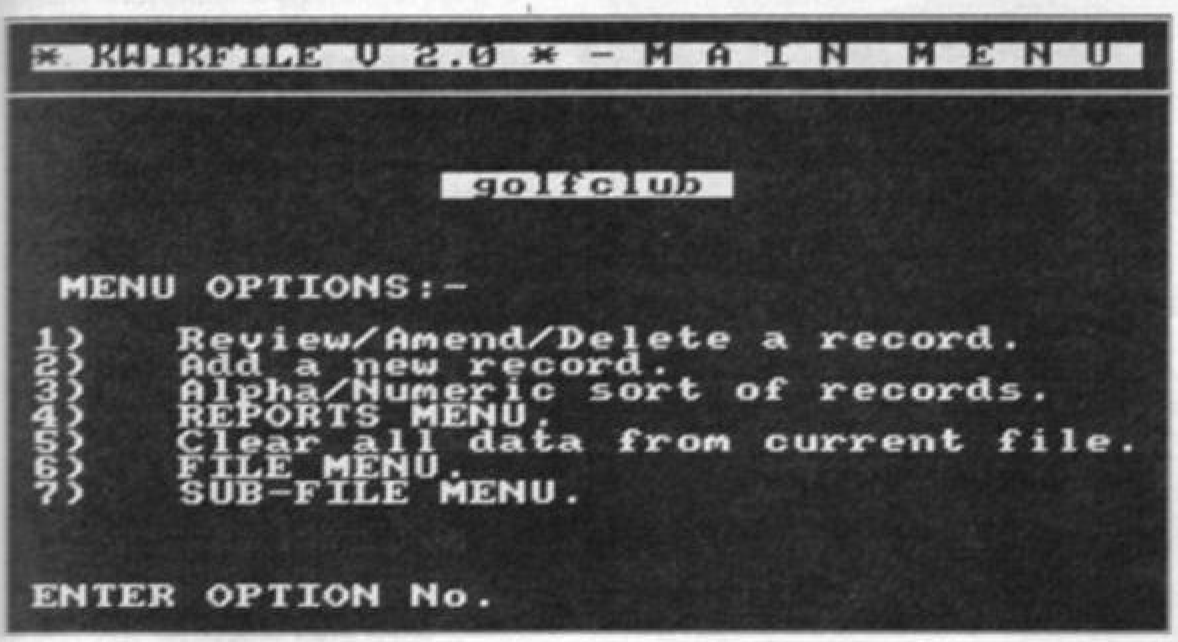


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Kwikfile

£12.50 disk only ● SD Micro-Systems ● P.O. Box 24, Hitchin, Herts SG4 OAE

There have been more Amstrad databases than almost any other serious program and a fair few of them seem to have been on Amstrad Action covertapes. So what makes this one worth buying when you already have a free one? MARTIN YOUNG finds out...



● *Kwikfile* comes with a couple of example files for you to experiment with while you're learning how the program works. *Kwikfile* offers all the usual database features, pluss a few more besides. Flexibility is its strong point.

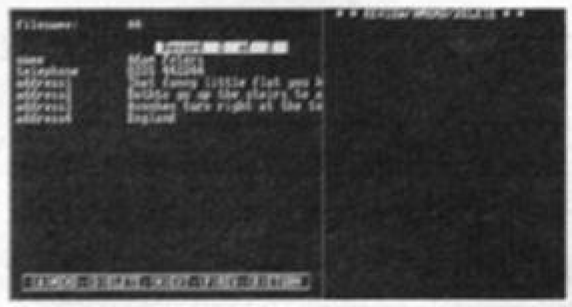
Flexibility, that's what. While *Kwikfile* may cause you to pull out a large amount of hair, some of its features will have you busy glueing it all back in. All the basic stuff is here: files made out of records, records made from fields and fields being either numeric or alphanumeric. Sorts and searches can be performed, the file can be viewed on screen or dumped to a printer and of course loading and saving to tape or disk is possible.

So far so bog standard. The most striking advantage of *Kwikfile* over lesser systems is its spreadsheet-like ability to perform calculations between fields. For example, if a record was being kept by a company of all its employees then one field would be"Hours worked" and another "Hourly rate". With *Kwikfile* a third field could be included which would be defined as "Hours worked" multiplied by "Hourly rate" to give "Weekly wage".

Nice, but perhaps just a little too simplistic to be of any real use as only one basic operator may be used.

One ability guaranteed to save threatened follicles is being able to add an extra field to an existing file. There isn't one database user who hasn't spent hours entering multiple kilobytes of data only to find it all wasted because there was a field missing. *Kwikfile* will kindly let you put the error right – but only once, mind, so use it carefully.

Simple printing is nice and easy. Output can either be across or down the page, with fields in any order. The arrangement of fields on the



● Type more than 28 characters into a field, and funny things start happening to the display. A bit of a bug, to say the least...

paper can also be set by the user in a rather limited way, and without a guide; you get the feeling of painting in the dark...

As with other databases, a whole bunch of records can be picked out to be dealt with in whatever way you see fit. *Kwikfile* handles this in asomewhat longwinded way, though. Rather than marking records, they are transferred to a 'sub-file'. Once there, very little can be done to them until they are saved off and reloaded as the main file – a real pain if youare using the tape version. Also, there is no easy way to carry out more complex operations like finding all the people who are 'single' AND 'rich' AND 'generous' OR 'senile'.

Up to this point, everything seems OK. *Kwikfile* is a nice enough, simple database. However, closer examination reveals some major problems. Fields, for example, can only be 28 characters long. Anything over this corrupts the screen display. It is going to be a real squeeze to fit a 'comment' field into such a small space.

The program has a heart! Well maybe not but it does have a jugular – the"." on the keypad. Press it on a menu screen and watch the computer die! (And watch all your data go with it.) *Kwikfile* crashes a great deal but does at least manage to catch itself on most occasions. One or two of the bugs are even documented in the manual. If SD Microsystems knew about these then it could have sorted them out before releasing the program onto an unsuspecting public...

Written in BASIC, everything happens rather slowly so that, what with the bugs and limitations, it's difficult to recommend *Kwikfile* over any other database even at the very reasonable price asked. **AA**



● Once you've defined your database's fields, entering data is easy. *Kwikfile* uses much the same system as any other database.



● Setting up your own database involves defining the number of fields in each record and their type.

GOOD NEWS

- Easy to start using
- Fairly low price

BAD NEWS

- Awkward to contnue using!
- Bugged

Verdict 68%

Mastering m

Welcome to article three in the ultimate assembly language course! Last month we dealt with most of the essentials, which means that we can really fly now! So, dust off the old assembler and lets get coding...

Incidentally, how are you getting along with HiSoft's assembler on the covertape of issue 71? If any of you are really stuck, write to me at *Amstrad Action* and I will help you out any way I can. If, on the other hand, you are finding the assembler well easy to use, then all I can say is don't be so flash!

Stacks and stuff

I can't believe we have got this far without discussing the *stack*. It is probably one of the most useful areas of memory in your Amstrad. The stack is an area of memory used for storing data so that the machine can keep track of what it is doing. The stack is normally located at address &BFFF, just below the screen memory, and grows downwards... if it grew upwards we would have serious problems!

The stack can be very useful for doing all sorts of naughty things, if used correctly. For instance, it can be used for extremely quick storing and transferring of data and can be used to speed up your programs no end. There are two instructions explicitly for the use of the stack:

N.B. rr refers to a double register (AF, BC, DE, HL or the index registers IX and IY).

`PUSH rr` – Pushes data onto the stack.

`POP rr` – Pops data off the stack.

The stack is very simple to use and, for those of you are interested, the computer uses the *Stack Pointer* (SP) to keep track of the next free location on the stack. This is fortunate because if the Amstrad did not have a stack pointer, it would be some form of mutated plastic mould and wouldn't be of any use to man, woman or machine! (*Pull yourself together man – ed*)

Now it's time for another assembly program which demonstrates the use of the stack (listing one). This program was written using the Devpac Assembler featured on the covertape of *AA70*. Just type: `I 10,10` in command mode and type in the code as printed.

Now press `CTRL+C` to return to command mode, assemble the program and run it. This is a simple example of how the stack can be used. Firstly, both DE and HL are *PUSHed* onto the stack so that the values held in those registers won't be corrupted in any way. Then, the first value on the stack is *POPped* off the stack and into HL followed by the second value held on the stack being *POPped* into HL.

This may all seem pretty pointless but it demonstrates a vital concept. It shows you how to preserve the values held in registers so that you can retrieve them when needed and it also allows you to perform cunning operations...

However, it is very easy to lose track of what has been pushed and popped, so be very careful. At worst, you will crash the computer. At best, you will have wickedly fast code!

A very hexy system

You have probably noticed that the numbers in my programs are very peculiar. This is a number system called hexadecimal (hex for short).

Hex uses the sixteen digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F. These represent 0 to 15 in decimal:

```
hex    : 0 1 2 3 4 5 6 7 8 9 A  B  C  D  E  F
10 ..... FF
decimal: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
16 ..... 255
```

For example, 17 in decimal is #11 in hex and 30 in decimal is #1E in hex. Hex numbers, using *Devpac*, are represented using the # symbol.

"This is all very well," you may say, "but why use such a peculiar system?" The answer is simple; it makes life easier for us because it works in a similar fashion to the number system 'binary' (the computer's number system), only hex is simpler to identify and calculate.

These numbers are stored in the computer in the same way as any other number, this system merely reflects the way the computer stores these numbers and makes our job a lot easier. Anybody not sure about the way the computer stores numbers should see article one in this series (*AA72*). You will quickly get used to using hex and, like me and everybody else, will prefer it.

Anybody requiring a complete list of hex and decimal numbers will find one at the back of their CPC user manual!

Rotating your bits!

Machine code is almost entirely a mathematical language. Hence there is no escaping the basic concepts. It is now time to discuss rotations and shifts of binary bits.

Rotations and shifts form the building blocks of routines like multiplication, division and scrolling etc. So, grasp this concept and you have grasped the basics of machine code programming!

Firstly, let's have a quick revision of how an 8-bit binary number is constructed:

value of bit	128	64	32	16	8	4	2	1
bit number	7	6	5	4	3	2	1	0

For example, if we had the following binary number, a right rotation of the number one bit to the right would look like this:

```
a) Start number:  1 0 1 0 1 1 0 0
b) Rotate right:  0 1 0 1 0 1 1 0
```

All that has happened is that the whole number has been rotated right one bit and bit 0 has been moved into bit position 7. The left rotation is merely the opposite of a right rotation:

```
a) Start number:  1 0 1 0 1 1 0 0
b) Rotate left :  0 1 0 1 1 0 0 1
```

All of the seven 8-bit registers can be rotated by using the following instructions:

```
RL r      Rotate 8-bit register left one bit.
RR r      Rotate 8-bit register right one bit.
RLA       Rotate accumulator left one bit
          (this instruction is one byte
          shorter than RL A).
RRA       Rotate accumulator right one bit.
RLC r     Rotate left with carry (see below).
RLCA      Same as RLC A but one byte shorter.
RRC r     Rotate right with carry.
RRCA      Rotate accumulator right with carry.
```

To finish off rotating our bits (ouch!), it is time to explain the use of the carry flag.

What use is the carry flag? Well, the carry flag can be used to multiply or add two numbers together with a total value greater than 255. It can also be used for multiplication and other mathematical routines, as you will see later.

For now though, let's see how the carry flag works...

Rotate left with carry: (RLC r)

```
a) Start values:   Carry: 0
        8-bit number: 1 0 1 0 1 1 0 0
b) RLC r        :  Carry: 1
        8-bit number: 0 1 0 1 1 0 0 0
```

As you can see, all that has happened here is that the end bit of the binary number was rotated into carry (1) and the old value in carry was placed on the other end of the binary number (0). A rotate right with carry operation (RRC r) is the exact opposite.

For those of you who haven't noticed, a rotation to the left is the same as multiplying a number by two and a rotation to the right is the same a dividing a number by two!

I think that it is time for another short listing, this time demonstrating the use of the carry flag. If you just go through this listing slowly you will see very easily how the carry flag can

achine code

be used. After all, it isn't the easiest of concepts to grasp (listing two):

Shifting your bits

Not as painful as rotating your bits, I can safely say! It is very simple really so I will keep it short. Let's take an example of a left shift. All bits all shifted left one bit as in the left rotation except that bit 7 is not put into bit 0. Instead, a zero is placed in bit 0 and bit 7 is lost into space:

```
a) Start number: 1 0 1 0 1 1 0 0
b) Shift left  : 0 1 0 1 1 0 0 0
```

A right shift is the opposite of a left shift. Furthermore, a left shift with carry uses the same concept. All bits are shifted left one bit, bit 7 is put into carry and the value held in carry is lost into space. That is all there is to rotating and shifting your bits!

A hexy routine

Now you know about the carry flag and rotating your bits around it is time for an extremely useful assembly routine. This routine is so useful that it is in almost every assembly program I write! (listing three)

In listing three you'll see the AND instruction. This will be discussed in the next instalment. However, as a quick explanation, AND tests the values of two bits and if both bits are 1 then that bit number is set to 1 in the accumulator, else it is set to 0.

i.e. 1 0 1 0 1 1 0 0 AND #F (0 0 0 0 1 1 1 1) gives: 1 1 0 0

Those of you who are still baffled will find a full explanation next issue – I have run out of space this time! So, until next time hack fans, happy programming... **AA**

Code & Chips

Got any machine code queries? Things you don't understand? It doesn't matter how stupid the question, how basic your knowledge, write to:

CODE & CHIPS
AMSTRAD ACTION
BEAUFORD COURT
30 MONMOUTH STREET
BATH
AVON BA1 2BW

Devpac users

If you've got a copy of Devpac from the *AA71* covertape, you can use the listings on these pages directly. To get to grips with the program properly, though, you may want to take advantage of Hisoft's special offer on the Devpac manual (which we couldn't covermount!). Send a cheque of postal order for £9.95 to: **Devpac Manual Offer, HiSoft, The Old School, Greenfield, Bedford MK45 5DE**. The price includes postage and packing.

Listing one

```
ENT $

; Listing One:
; Program demonstrating the use of the stack


LD HL,#414E
LD DE,#4459
PUSH DE         ; push value in DE onto stack
PUSH HL         ; push value in HL onto stack
XOR A           ; (same as LD A,0 only smaller and quicker)
POP HL          ; pop first value off stack into HL
LD A,H
CALL #BB5A
LD A,L
CALL #BB5A
POP HL          ; pop second value off stack into HL
LD A,H
CALL #BB5A
LD A,L
CALL #BB5A
RET
```

Listing two

```
ENT $

; Listing Two:
; Program to add #5432 to DE
; DE already holds #1000

LD A,E          ; load #00 into A
ADD #32                 ; add #32 to A
LD E,A          ; put result back into E
LD A,D          ; load #10 into A
ADC #54                 ; add #55 if overflow in carry from E
LD D,A          ; put result back into D
RET             ; DE now holds #6432
```

Listing three

```
ENT $

; Listing Three:
; Routine to print the contents of A as a hexadecimal number
; Entry: A holds hex number
; CALL PRINTHEX to call routine
; e.g. LD A,#41
;      CALL PRINTHEX
;      RET

PRINTHEX:       LD B,2              ; loop count is 2
                LD C,A              ; put A into C
                RRCA
                RRCA                ; rotate A right four times
                RRCA
                RRCA

MASKNUMBER:     AND #F              ; delete bits 4 to 7
                CP #A               ; bits 0-3 more than #A?
                JR C,ENDROUTINE     ; if carry, goto ENDROUTINE
                ADD A,#7  ; else add 7 to A

ENDROUTINE:     ADDA,#30  ;add#30sonumisa char
                CALL #BB5A; print character
                LD A,C              ; put C back into A
                DJNZ MASKNUMBER     ; B=B-1 if B not zero then
                RET                 ; goto MASKNUMBER else RET
```

Forum

Adam (Prof) Waring is on his hols, so this month JERRY (DOC) GLENWRIGHT steps in to edit the tech help spot. Remember, if we can't give a solution, one of our readers surely will – that's why it's called *Forum*! Or maybe you've discovered some valuable tip you want to share with the rest of us? Write to: *Forum, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW*

Getting bitwise!

Q I have just bought an Epson LQ400 dot matrix printer and I have several questions to ask you:

1. Can I print characters above CHR$(127) using my *Amsword* word processor in connection with my printer? If not, why?
2. Where can I get a dust cover for my printer?
3. Where can I buy a much better word processor than my present one?

Mark Holmes
Exeter

A The problem lies not with *AmsWord*, which you seem to imply, but with the Amstrad's printer port, which is only seven bits wide. There simply aren't enough bits to produce numbers above 127. Confused? Don't be, it's simple. Imagine the seven bits as seven little cells each of which can be zero meaning 'off' or one meaning 'on'. Now imagine these seven cells arranged in a horizontal row and that each cell represents a numerical value which can be either included in or excluded from an overall value. The cells look something like this:

```
64 32 16 8 4 2 1
```

Remember that each of these cells can be included or excluded from an overall value and then, as an example, use the seven bits to represent the number 97. It would look like this:

```
1 1 0 0 0 0 1
```

meaning, add a 64, a 32 and a 1 to the overall total but exclude all the other possible values. Similarly, to represent the number 123, the cells would like this:

```
1 1 1 1 0 1 1
```

You can see that the largest possible number that can be represented with a 7-bit printer port is 127 (ie all bits switched on). Fine, but *by excluding that left-most eighth bit* (known as the 'most significant bit' or MSB) which would be 128, it isn't possible to get a full complement of 8-bit numbers – those from 128 to 255. Therefore it's – theoretically – impossible to print any character whose ASCII value is greater than 127.

Recently, however, reader Kenneth Scicluna of Malta sent in a method of getting at those elusive characters above 127 (see elsewhere in this month's *Forum*). His solution is for a Star LC200 so we can't guarantee it

Mutton heads!

Q Many people (including you, as far as I know) claim that with the Amstrad's 7-bit printer port you can't print characters which have an ASCII number above 127. Well, you lot of mutton heads, you can! At least, you can on the Star LC200. Here's how...

Step 1. Using the electronic DIP switches, set switch A1 to ON to set the printer to standard Epson emulation.
Step 2. Set switch A2 to OFF to use the printer's buffer to download user-defined information.
Step 3. Set switch D1 to ON to select character set number 2.
Step 4. Press the On Line button.
Step 5. Type in the following program.

```
10 MODE 2:INPUT "Choose font: (0) Courier, (1)
   Sans Serif, (4) Script, (7)Orator "'cs
20 PRINT #8,CHR$(27)+CHR$(58)+CHR$(0)+
   CHR$(cs)+CHR$(0)
30 PRINT #8,CHR$(27)+CHR$(37)+CHR$(1)
40 PRINT #8,CHR$(27)+CHR$(55)
```

Here's what the program does. Line 10 simply allows the user to select a font. Line 20 instructs the printer to copy the selected character set from its own ROM to RAM. Line 30 tells the printer to select the character set stored in its RAM (which could be a user-defined set but in this case is the one copied from ROM). And finally line 40 tells the printer to standard character set 1.

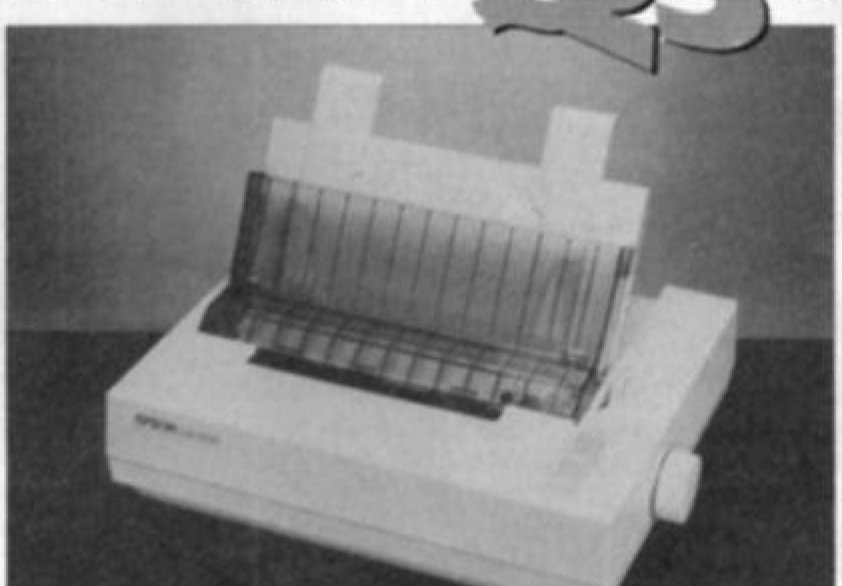
Now to access the characters from 128 to 255, precede the text with the code '<ESC> >' (?#8,CHR$(27)+CHR$(62)) and to return to normal text use the code '<ESC> #' (?#8,CHR$(27)+CHR$(35)).

It's necessary to select the standard character set number 2 first then select number 1 at line 40 because the above two code strings work only with set number 1 which doesn't have the graphics characters of set 2.

If you print this letter can you say a big Hi! to Joanie?

Kenneth 'FF' Scicluna
Malta

VOUCHER £25



● Even though the CPC only has a 7-bit printer port, you can print characters with an ASCII number above 127. That's what Kenneth Scicluna of Malta reckons, anyway...

A Normally no, cos we're too busy squeezing in help and tips to print friends' names, but as this is such a clever little tip, OK. (Anyway, you just did it.) Thanks for the neat solution to the 'missing' printer port MSB.

will work with an Epson, but as the hack is performed with the Star in Epson emulation mode, it's worth a try.

2. Is there a supermarket near you? Any Sainsbury's, Tesco's, Waitrose or what have you supplies excellent dust covers for a variety of equipment in the form of plastic carrier bags available free when you buy a few quid's worth of groceries. Think I'm kidding? Try it! They're free, and keep the dust off your machines at least as well as anything with double-stitched corners, the name of the device printed in one corner (as if you didn't know know) and a fancy price tag to match.

If you absolutely insist on a 'proper' dust cover, then I'm afraid I must say 'dunno'.

3. A piece of chalk and bit of black slate would be better than *AmsWord*! The best word processor available for the Amstrad and the one used in the *AA* offices is *Protext* from Arnor. The program is available on ROM or disk for the reasonable (ultra-cheap when you consider the features) price of £25 from: Arnor Ltd, 611 Lincoln Road, Peterborough PE1 3HA (0733 68909).

Excited, of Portsmouth!

Everybody knows that machine code is extremely fast. Everybody knows that there are lots of ROM routines just waiting to be used inside the CPC. The ROM routines are very slow from a machine code point of view (*er, are they? – tech ed*). It would be much faster and more pleasing to do everything yourself than to use the ROM routines. One of the most difficult tasks is reading the keyboard. Detecting which key has been pressed is only second to manipulating the tape and disk in the difficulty stakes.

Last night, I figured out how to read the keyboard using machine code! Oh, how happy I was and still am. I could have danced all night if only I could dance. And now I'm hungry to tell everyone how to do it.

First, send #82 (ie hexadecimal 82) to the control register of the 8255 PIA to tell it to use port A as output, port B as input and port C as output (you must never use port B as output – you'll destroy the chip!). Now write the following values to the relevant ports. Port A, #07, port C CF, port A DF, port C 8F, port A 0E, port C CF. Write to the control port the number #92 to tell the PIA to use port A as input, port B as input and port C as output. Then write #40 to port C.

Now you can use IN A, (C) to get one byte from the keyboard into register A. Here's an explanation of the byte that you'll find in A. Bit 0 cursor up, bit 1 cursor right, bit 2 cursor down, bit 3 9 in extra keypad, bit 4 6 in extra keypad, bit 5 3 in extra keypad, bit 6 ENTER in extra keypad, bit 7 decimal point in extra keypad.

All keys are negative active – if a key isn't pressed it gives a logic 1, if it is pressed, a logic zero, so if no keys are pressed the byte will be FF. Simple!

K Vieten
Portsmouth



● M Jordan wants to transfer BASIC programs from his 6128 to a PC. How does he do it? See "Tedious transfer?"

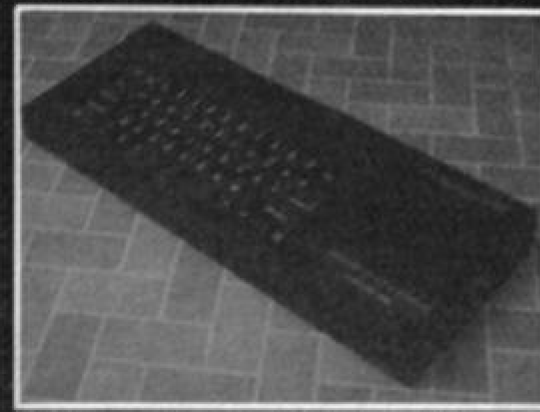
Dead drive

I have a dead Spectrum +3 (*best thing for 'em – tech ed*). Can I extract the disk drive and make it work with my very-much-alive CPC464 which has a switchable 6128 ROM added?

Ian Millward
Hednesford

Want the short answer? Yes! But you'll need to be reasonably electronically aware. You'll also need a suitable edge connector and bit of ribbon cable. You can get these (at the cheapest price) from Maplin Electronic Supplies, Summer Road, Erdington, Birmingham B23 6TH (021 384 8411).

The drive requires a power supply, too. You could use the supply from the dead Spectrum and step down the voltage or simply get hold of one of those multi-voltage adaptors sold on market stalls everywhere.



● Got a dead Speccy? Well with a bit of know-how you might be able to cannibalise it for your Amstrad...

Tedious transfer?

I have a requirement to transfer some of my BASIC programs from a CPC6128 to an IBM PC running Microsoft *QBASIC*. I know that I will need to write an emulator/convertor program on the PC and this is no problem. I need your help in telling me how I can transfer those programs.

Do I need a 5.25-inch drive attached to the Amstrad or will I attach the two computers together, using the RS232 connections? How much will this all cost and are there any other methods of transfer?

M Jordan
Darlington

A year or two ago there used to a cottage industry in data transfers between popular machines. The company responsible for the transfer advertised their service in our sister magazine *New Computer Express* and charged – if I remember rightly – a reasonable sum for the job. Even at an unreasonable sum, this would be cheaper than buying the necessary hardware to facilitate the transfer. Have a rummage through *NCE* classifieds and see what you come up with.

Alternatively, go for the RS232 option. Forget attaching drives – it's beyond you. If

Screen save

Here's another letter regarding my screen hacking tip. This tip will enable you to save your screen as a 17K file. All you have to do is just after you reconstruct the graphics of the screen using BASIC (ie BORDER, INK, MODE etc...) type in the program and type

```
CLG:CLS:RUN [enter]
```

As soon as you hear a series of bleeps press the red button then carry on with the instructions. You might need a few adjustments if you don't have a 464 and DD1.

```
10 'SIMON BROWNE 1991
20 FOR A=1 TO 1000:NEXT A: 'SLIGHT DELAY
30 FOR A=1 TO 2500:?CHR$(7)':NEXT A:'RED BUT-
TON DELAY
40 SAVE "SCREEN",B,&C000,&4000
50 CLS
60 INPUT "Enter a name for the screen: ",A$
70 B$="SCREEN.BIN"
80 |REN,@A$,@B$
90 A$="ABC?.BIN":|ERA,@A$
100 A$="DEF?.BIN":|ERA,@A$
110 CALL AMSTRADACTION
```

When the computer resets, CAT your disk and your screen should be saved as a 17K file. See, I bet Romantic Robot didn't think of that one!

Now maybe you can answer a question for me. I'm just going into 5th year at school and I'm not supposed to be on my computer at all. What shall I do? Face being slaughtered by my parents or fail my exams? All advice gratefully accepted.

Simon Browne
Sutton Coalfield

I remember not so long ago that parents were practically forcing their kids to sit at computers in order to *improve* their exam chances! Solution? Ensure that all you exam subjects require projects which feature extensive use of the '464...

Disk duplication

I am thinking about buying a floppy disk drive for my Amstrad CPC464. I have a lot of games on tape for the CPC and I'm wondering if it is possible to copy these onto disk?

Graham Baines
Morpeth

Yes and no. You can't simply issue some command or other and reproduce the games on disk (although that would be the best way and should be possible) because they're copy-protected.

In order to stop pirates making copies of games and giving them away to friends, most software houses devise clever little methods to protect their programs and stop them from being halted, disassembled, copied and so on. Unfortunately, this means that you, as the legitimate owner of the software, cannot make a faster-loading version by copying to disk. No-one blames the software houses for taking these protection steps, but it does make life for disk upgraders a little difficult.



● If you buy a 3-inch drive for your Amstrad, will you be able to transfer all your games to disk?

Fortunately, several companies have marketed tape to disk copiers over the years. We don't want to recommend one over another because they all work to a greater or lesser degree, so the best advice is simply to look through the advertisers in each issue until you spot one for sale, and then call the company responsible and ask them about their software's transfer success rate. If this sounds good, buy the product.

Be aware that there will always be cassette games which can't be transferred – at least, they could, but no-one's come up with the necessary routines yet.

you don't already own an RS232 interface, you'll need to acquire one from one of our advertisers.

You'll also need to build what's known as a 'null modem'. This is simply a serial connection between two machines that doesn't work via a modem, instead consisting of a standard serial cable (pins 2 joined, pins 3 joined, pins 7 joined, pins 8 and pins 20 joined) with pins 2 and 3 crossed. That is to say, pin 2 goes to pin 3 (Tx goes to Rx) and pin 3 to pin 2 (Rx goes to Tx).

Terminal software with XMODEM or some other file transfer protocol is required for both the PC and the CPC. To transfer, Run the terminal software on both machines, select XMODEM send on the CPC and XMODEM receive on the IBM, choose a file and it's transferred.

Now, what was that about an emulator being simple to write?

Fly-lead in the ointment

I am a lucky owner of a CPC464 with 6128 ROM and a 664. If I was to connect up a fly-lead to get around the physical problems, is it possible to run a 64K expansion RAM pack and mouse interface on both machines (not at the same time)?

I checked the pin-outs of both computers' expansion ports and they are the same.

Kev Swann
Cornwall

Hang on, do you mean that you want to connect the expansion devices to both computers at the same time and switch between them or simply that you want to connect these devices to each computer separately?

If the former then – theoretically – yes. It's quite literally possible to connect anything to anything if you know how.

That said, in practise, the task would be far more trouble than it's worth (although I appreciate it's a drag to plug and unplug devices between machines which have to share).

If, however, you simply mean that you want to connect the same expansion devices to each machine *in turn*, sure! Go right ahead.

Blocked buffer!

I have a problem with the Amstrad DMP3000 printer which I own. It will not stop bleeping at me every time I turn it on and press the on line key.

My Dad thought it was a blocked buffer but a phone call to an Amstrad shop settled that as the man said the buffer was cleared whenever the printer was turned off.

I have one more question for you. When you said in your mag that the *Type-Ins* are public domain does that mean that the authors of type-ins will receive blank tapes and disks from people asking for a copy?

Richard Wilding
Southampton

It isn't the buffer. Printer buffers consist of RAM chips and as I'm sure you know, whenever power is disconnected from a RAM chip its contents are lost.

Obviously, without examining the device it's a little difficult to determine the problem but I'd hazard a guess and say that as the bleeping only occurs when you switch the printer on line, there's probably something wrong with the paper out sensor. The best thing to do is to pop it along to an Amstrad dealer and have them look it over. Shouldn't cost too much just to check and replace a faulty sensor.

Type-Ins are public domain but that doesn't mean that those responsible for writing them are besieged by hordes of lusty CPCers waving handfuls of blank disks and tapes around! That's not actually how it works. Authors who 'put' their software in the public domain are under no obligation to distribute the stuff – they're merely saying that if you come across a copy of the program, you're welcome to copy it. Or if you've type a program into your machine, you can give a copy to your friends too. Whatever you do, don't start sending blank disks off to authors of *Type-ins*!

Rounder pies

After reading a back issue of *AA* (issue 48, to be exact) I read a letter from T P Cheung who suggests that to get pie charts that are round from *Mini-Office II* instead of the appalling oval variety you should send this control code to the printer:

```
PRINT #8,CHR$(27)'"?K"CHR$(5)
```

CHR$(5) being an Epson code. As there is no way to terminate the print-out of the pie chart without turning the printer off, the control code is lost whenever the printer is turned off and so the old shape returns.

The best thing to do then, is to put the control code in the actual program so that it's sent to the printer every time the print icon is chosen. Luckily the last 11 blocks of the graphics program is in BASIC. These 11 blocks contain much of the program including save, load, print and so on. To put the control code into the program, CAT the tape until you come to a file called 'graph'. Rewind the tape just a little and type in this poke:

```
POKE &AC03,&C0:POKE &AC02,&90:POKE &AC01,&C3
```

Now type in LOAD"GRAPH" and sit back. Don't type in 'run'.

When all the graph files (11 in all) have been loaded the program should be LISTable. Now edit line 4420 which reads:

```
4420 CALL &A251:RETURN
```

And change it to this:

```
4420 PRINT #8,CHR$(27)'"?K"CHR$(5):CALL
    &A251:RETURN
```

Now save the program to a *separate* tape. If you want, you could save the modified program over the original program but make sure you record the whole of side B (graphics, comms, labels, etc) just in case you record over the wrong part of the tape.

I think this solution should help a lot of frustrated *Mini-Office* users.

Mark Griffiths
Dyfed

Ask Alex

The *Forum* section is for people who are technically pretty clued-up. But if you're an outright novice, write instead to me, Alex van Damm – I'm *Amstrad Action's* very own tutor for beginners.
Don't worry if you thinkyour question sounds really stupid –



● Alex van Damm is here to answer all your beginners' questions...

we all had to start somewhere! And while I'm answering individual queries, it'll give me a chance to introduce some more general computing information as I go along.
The address to write to is:

ASK ALEX,
AMSTRAD ACTION,
BEAUFORD COURT,
30 MONMOUTH STREET, BATH, AVON
BA1 2BW.

There's a really interesting crop of queries this month including cartridge questions and a guy who wants to publish a magazine to rival AA! Will you be buying his instead of ours? Read on...

Will my cartridge wear out?

V R Galaszia of Canterbury is a self-confessed wrinkly old green-screen user who's recently upgraded to an Amstrad CPC464 Plus – but it's worrying him.

"As an old CPC464 green screen user I have just purchased a CPC464 Plus. Trouble is, I have now noticed that the BASIC language is now on cartridge instead of being built into the machine like my old Amstrad CPC464.

"What happens if or when the board in this cartridge wears out or is damaged as it will be when taking the cartridge in and out and putting in game cartridges? It means that my machine will be dead for my tape programs!"

Gosh! You are a worrier aren't you V R? Remember that the machine is designed to have cartridges plugged in and unplugged – the cartridges are designed to stand up to it. In the normal course of things you can't wear out either piece of equipment simply by using it as it ought to be used!

If you're worried about that cartridge Mr Galaszia, here's a little tip – it applied to all types of 'edge connectors'. By an ordinary, everyday pack of cotton wool buds and a small quantity of methylated spirits from a chemist. Dab the former into the latter and wipe over the cartridge contacts periodically to remove any build-up of grease and dirt. This will ensure that the contacts are always clean and make a good electrical joint with the cartridge slot.

What is a cartridge game anyway?

Aleks Pluskowski of London writes, "What exactly are cartridge games? Do you need extra accessories to use one? Are the graphics better? And what are the advantages and disadvantages of a cartridge game?"

Cartridge games, Aleks, are those which are have their programming code burned into a ROM chip and which are then enclosed in a convenient plastic envelope to be plugged into your computer. To use a cartridge, you need a cartridge port such as those built-in to the Plus range. Cartidge games on the Amstrad do have much better graphics because they use additional hardware inside the machine that ordinary tape or disk-based programs can't access.

The advantages of using a cartridge rather than tape or even disks is that they never become corrupted. Short of smashing the thing with a hammer, you can't possible break a cartridge in the same way that you can damage a disk by leaving it in the sun or putting it next to a source of electro-magnetic radiation.

Another advantage is that cartridge software loads almost instantly and the computer can manipulate firmware-based programs (as software on cartridge is known) far more efficiently than it can manipulate tapes and disks.

Disadvantages? Cartridges cost a great deal more to manufacture (and therefore buy!) than disks..

I want to publish a magazine!

Now for a young man who wants to "...catch the public's attention!" Take it away Adam Alexander of Northampton. "I have been assigned a school GCSE project in which I have to design a new computer magazine and computer game.

"I have decided to make to magazine for Amstrads (this being my favourite make) and I though that I would include the computer game part of the project as a cover-mounted tape with centre page spread review. The idea came to mind when I saw your magazine did the same.

"My problem is that I have an Amstrad computer (CPC464) but I don't know how to go about making a new game. I would also be grateful for some information on how to catch the public's attention. I need the magazine to stand out so people can find and notice the magazine."

Well ever since the dawn of home computers there have been no shortage of journalists and authors generating entire books on the subject of constructing computer games, mainly in BASIC – the language built into your machine.

One of the best, even though it is not Amstrad CPC-specific, is Tim Hartnell's *Giant Book of Computer Games*. You probably won't even have to buy a copy – simply pop along to your nearest public library. If the don't have the Hartnell book, they will definitely have something you can use for ideas and programming information.

As for making a magazine which catches the public's attention, look no further than *AA*. A really bright and brash cover is always a winner, and if it has plenty of lively headlines touting what's going on inside, then readers can barely tear themselves away!

If you have access to desktop publishing at school, try not to use too many different fonts. DTP package programmers are always shouting about how many fonts their software provides but there's nothing more amateur-looking then using a typeface simply because it's available for use.

Use a nice, bold, strong headline font, perhaps the same thing smaller and in italics for the strapline (the little bit of text below the headline) and something different for the main body copy. Don't forget the pictures – essential for added interest.

And that's it. Two fonts, three styles and you've got a magazine.

ACTION TEST

A spanking coin-op conversion from the Goldies and a brill film tie-in from Ocean...

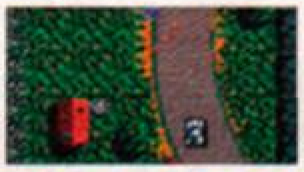
TERMINATOR 2
Ocean — RAVE!



● Don't be fooled by that jellymould geezer in front of you – he's a rock-hard T-1000 terminator

JAMES BOND COLLECTION *Domark*





● Bond's back in a three-game compilation

THUNDER JAWS *Domark*



● Trouble under the sea with Madam Q and her cybernetic sharks...

DARKMAN *Ocean*



● The film that no-one went to see. They were right.

FINAL FIGHT *US Gold*



MASTER GAME

● Giant sprites, smooth scrolling and loads of fighting moves. A brilliant conversion of the coin-op.

It's *Darkman*. "Well switch the flipping light on then, man." Ho ho. We're putting this joke in the comedy public domain, so you and your chums can have hours of fun re-telling it again and again. More fun than you'll have playing the game? Well that depends how patient and how beat-em-up hardened you are.

Darkman was actually a film that no-one bothered going to see. That includes us, so we're going to have to guess what it was about. We think it was something to do with an Egyptian mummy in a trenchcoat, who wandered around kicking and punching people, until he died. Well, that's what the game's like anyway. The film might have had more to it.

Darkman consists of nine levels, if you include the photo session sub-games, of which there are three. These seem to be shooting gallery sort of things, but we're blowed if we can work out what you're supposed to do...

Level One is set in Chinatown. (That's Chinatown in New York, not Chinatown in London, or Chinatown in, er, China.) The basic idea here is to move right, punching and kicking all the evil Sainsbury's staff, ninja scuba divers and savage poodles that appear and try to do you an injury (well, several injuries actually). This is, let's be honest, pretty darned difficult.

If you get past it, you then get to play the photo session thing. Oh, hang on, yeah. We think you've got to press the Fire button wildly over the person who looks like the photo you get shown at the start. And then maybe you'll get some energy back or something. Oh no, there's a daddie long-legs just come into the room – the *AA* office that is, not the game... Aaaaargh! (*Hurried exit.*)

(*Fifteen minutes later.*) Sorry about that. (It's the time of year, apparently.) Level Two (three, if you include the photo thing), set in a factory, is the same as Level One, only with platforms in it. It also bears a remarkable similarity to *Batman the Movie*. It's also darned frustrating to misjudge a jump and end up five levels lower down.



Level Three is the best of the lot. Durrant (a baddie) is lobbing grenades at you as you leap from roof to roof. Timing is all-important here. Level Five sees you being dangled from a helicopter over a busy motorway. Sounds silly? It plays a bit silly too, actually.

DARKMAN

OCEAN ■ £10.99 cass, £15.99 disk

SECOND OPINION

"It looks like Dick Tracy – without the gun. OK, so the overcoat's not banana-coloured, but the gameplay – while more varied – isn't much more fun. I'm glad I didn't go to see the film...

Rod Lawton

Then there are another two photo-thing levels and two more platformy beat-em-up jobbies. And that's it really. Graphics are great, with luvverly detailed background. Sound is limited but okay, and there's certainly plenty of game for your money.

Unfortunately, it's so hard, and so darned tedious, you'll probably give up without getting past Level One, become a monk (or nun) and spend the rest of your life writing a book about Joan of Arc. Oh well, at least there's no daddie long-legses in it. (*In the distance, a flapping sound and sinister insect laugh. Another hurried exit.*)

Adam P



● Oh no, we're being attacked by the keyboardist out of EMF. Go on, hit 'im, hit 'im!

FIRST DAY TARGET SCORE

Persevere!

DARKMAN VERDICT

GRAPHICS............ 86%
So nice, a mad Sicilian might attack them with a hammer at any moment.

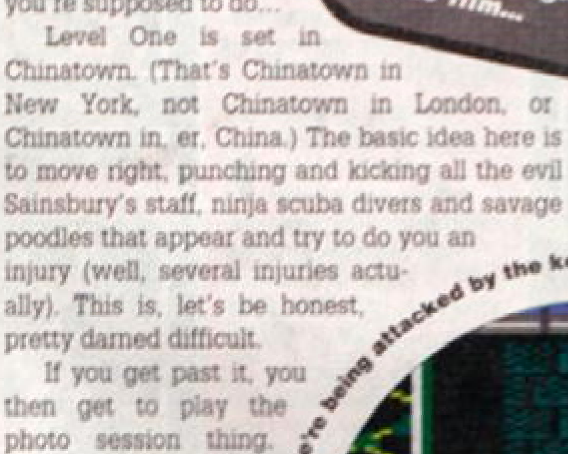
SONICS................ 63%
You're unlikely to be bopping to this down the disco.

GRAB FACTOR....... 23%
Tedious, difficult opening level doesn't bode well.

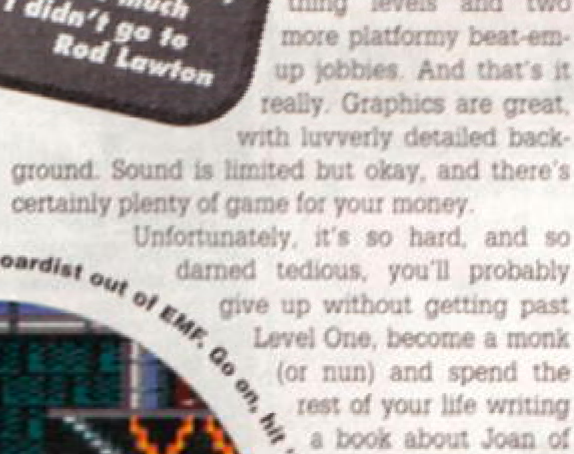
STAYING POWER... 72%
The answer, my friend, is blowin' in the wind (hint).

RATING 57%

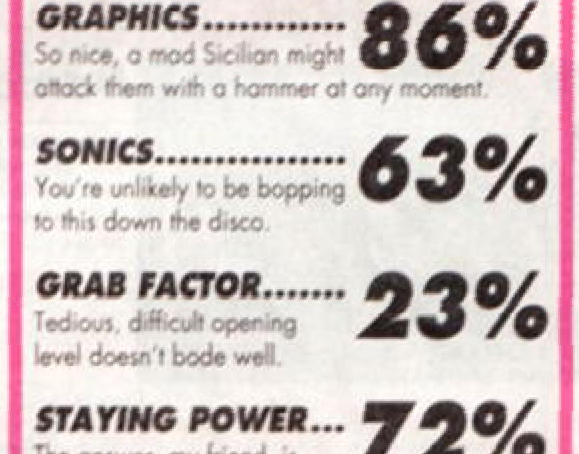
There's a lot to do in Darkman, but little chance of being able to do much of it.



● Oof! Here we are, in an alleyway, being attacked by ninja scuba divers. Typical. And we'd only popped out for a pack of mints.



● Level Three, and we're leaping across the rooftops amidst a hail of bombs. At times like this, we wish we'd taken up plumbing instead.



● Dangling under a helicopter over the M25 from a bit of string. Remember, *Darkman* is only a sprite – don't try this yourself.



● Arnie: "Ah, shopping mall. Time to buy shiny Western goods. Ow! Oh no, a shop assistant with a poky metal hand. Grrrr."



● Arnie: "Ha, got him. He just big puddle on the floor. Ha ha. Oh no, he will not die. He come back again and again. Aaagh."


● Arnie: "Hold tight John, you irritating little kid. T1000 chase us with truck. We must go fast and not crash. Where accelerator?"

TERMIN

OCEAN ■ £10.99 cass, £15.99 disk

Once upon a time, in 1997, the world was devastated by a nuclear firestorm. Thirty-two years later the surviving humans, led by military genius John Connor, found themselves at war with The Machines. And this was all slightly more serious than your parents not being able to work the VCR.

Those nasty Machines sent a Terminator (killing machine) to Earth year 1984, to bump off John Connor's mum so he'd never be born. Fortunately, Connor sent some bodacious dude from the human resistance back in time to protect Ma. The whole thing ended with Arnie Schwarzenneger getting crushed in a steam mangle.

It's now seven years later, and it seems those nasty Machines sent two Terminators back through time. The second one, an advanced T1000 model, turns up in the year 1991. It's objective to kill John Connor, now a strapping lad of fourteen. (Er, hang on... he wasn't born in 1984, so how can he be fourteen? Oh well, never mind.)

Fortunately John Connor 2029 has managed to send off a protector for John Connor 1991. What's more, it's a Terminator. Arnie again, in fact. (But not the same Terminator of course, that got crushed in a steam press, remember. It's just another Terminator that looks/talks the same.)

Terminator 2 has already broken more box office records than the last thing that broke all the box office records (*Turtles*, probably). The film has got the sort of irritating pedagogical (*you what?* –




● Arnie: "Now in truck. Trying to avoid other traffic while Sarah shoots at T1000 in helicopter. Out of the way, you Sunday drivers!"


● Arnie: "Now in steel mill. T1000 very strong. Arnie very weak now. Still not going to give up. Get ready for this, Mr T1000..."

Judgment Day Dictionary...

Connor, John: In the year 2029 AD he sent you back in time to the present, in order to protect him (aged 14 or so) from the T1000. He's a cheeky little oik, but unfortunately your programming won't let you chuck him off a bridge and go clubbing with T1000 instead, so you'll just have to protect him. Darn.

Connor, Susan: John's mother, with a strange penchant for cool sunglasses and high-velocity assault rifles. She never appears on screen during the game, but does a fair job of helicopter-shooting in Level Four.

Difficulty: Ocean has the difficulty set just about right on this one. It's easy to get to grips with on the first level, and you'll soon be able to win through with the minimal or non-existent damage necessary to get through Level Two (*speak for yourself – ed*). It then starts getting much harder.

Energy: Your energy and T1000's are shown by the pictures of you at the bottom of the screen. Each blow turns a bit of the coloured piccie into black and white. Once you're all in monochrome you're dead. No other lives. No continues. No getting up and saying "ho ho, just shamming." That's it sunshine.

Eye, repair of: A sub-game to try and get back some energy. It appears between levels four and five, and is like one of those number puzzler things. You know, where you've got the numbers 1 to 15 on bits of plastic that you have to slide around till you get them in the right order. In this case, it's bits of Arnie's eye you have to slide around. Yeuck!

Flood Channel: Level Two sees you racing down the channel on a motorbike, Johnnie on your lap. T1000 is haring after you in a big truck. Dodge the rocks, petrol barrels et al, jump over cars, splash through water, screech through grass... and try to keep as far in front of the truck as you can. Cowabunga! (Oh sorry, wrong film.)

Freeway: You, John and Susan are racing down the freeway in Level Four, trying to avoid crashing in to too many other vehicles, whilst that nasty T1000 chases after you in a helicopter. Go on Susie, blow the little schmuck out of the sky!

Gameplay: There's three different styles of play involved, with two racing games, two puzzle games and two combat sections. Whilst none of these have the depth to hold a game on their own, and you'd soon get bored if subjected to them for prolonged periods of time, the variety



● Arnie: "Nearly there. See distance metre hanging in mid-air over to right there. We must look out for rocks and barrels and things."



● Arnie: "Oh no. A headbutt to try and avoid. We're in the mental hospital, and I can kick, punch, headbutt or knee the T1000."



● Arnie: "I kick him first, as my leg was already moving when I thought about it. This will sort him out."



ATOR 2

FIRST DAY TARGET SCORE

Suss out the hand repair bit

SECOND OPINION

"Level One looks great – until you realise you don't go anywhere! But the variety and quality of the rest of the game carry it through."
Rod Lawton

come to expect from a country that's as free with its peace-moralising as it is with its F111s. All in all, though, not a bad little movie. And not a bad little game either.

Adam P

TERMINATOR 2 VERDICT

GRAPHICS............ 87%
Nice big battling sprites. The rest ain't bad either.

SONICS................ 46%
Crap title tune, and a few crashing noises.

GRAB FACTOR....... 91%
Level Two is so addictive it should only be available on prescription.

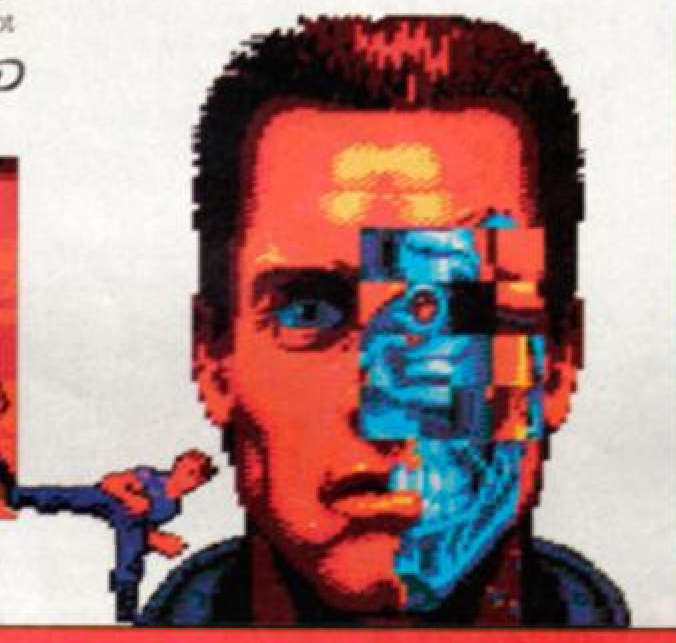
STAYING POWER... 85%
You'll really want to finish the game.

RATING 89%

Terminator 2 has its drawbacks, but it certainly keeps you coming back for more. And more. And then a bit more.



● POW! Arnie: "Ha, that did the trick. If he gets up from that, I will give up and go home. Phew, tiring work. I need a drink."



makes *Terminator 2* hang together well. The combat sections might seem repetitive, over-hard or simplistic at first glance, but once you get into them and start working out combinations of moves, they ain't at all bad.

Graphics: The graphics are pretty not bad. The massive sprites and animation in the combat sections is fab. There are some pretty detailed graphics in the puzzle sections too. The traffic in Level Four looks pretty crap, but you can't have everything.

Hand, repair of: Not, strictly speaking, much to do with the film, but an excuse for Ocean to throw in some of those puzzle-type sub-games it's so enamoured with when doing movie licences. Find this between Levels Two and Three. What are you supposed to do? Dunno, but you get some energy back if you can do it.

Mental Hospital: The second bout of combat. It's Level Three, and T1000's now a bit more hard than he was before (and he was pretty darned hard then). In the film, all this stuff was carried out with big guns. Here, it's just good old fashioned beat-em-up fare. Take that, you big brute! Biff! Pow!

Shopping Mall: Level One is set here. You're the big Arnie thing, and your job is to kick, punch, knee, headbutt and generally do lots of unpleasant things to the short guy in the police uniform (T1000). Keep rattling those blows in as fast and as varied as possible, to prevent him getting much chance to hit back.

Sonics: You can compose your own version of the title music using the drumkit program on this month's covertape – you'll only need to use one sound (the snare)! In-game effects are not much better.

Steel Mill: The final level is another beat-em-up jobbie. This time, T1000 is raining those headbutts and lacerational handshakes in like there was no tomorrow. Which, if you can't beat the brute, there probably isn't.

T101: That's you. Well, actually, in the film you were a T800 (model 101), but what the heck? At least you're still Arnie Schwarzenegger, not Pee Wee Herman or someone like that. In the combat scenes (as in the film) you're a lot bigger than your opponent, but that doesn't really help, unfortunately.

T1000: This is the baddie you've got to do over. He's a far superior model Terminator to you. His main advantage is that he's made of liquid metal, which means he's very hard to kill (he just keeps reforming, the little swine). His headbutts are well 'ard and his arm becomes a nasty sword-like thing when he feels like it. All in all, one mean uncle-kisser.

THUNDERJAWS

DOMARK ■ £10.99 cass, £17.99 disk





● Underwater fact number two: The clearest sea is the Weddel Sea near Antrctica. It has a visible depth of 262 feet.

Eighteen quid?! Blimey! Oh well, on with the review... Just when you thought it was safe to go for a dip again. You know, no more oil slicks, no more swimming rubbish, no more floating toilet deposits, and the end of that rotten plastic shark from the movies. Just when you thought it was time to dig that swimming cossie out once more, along comes some mad scientist called Madame Q, and the next minute there's lizard-women, lava-men and manta-creatures splashing around all over the place.



● Underwater fact number one: The Atlantic Ocean consists of 3,240,360 cubic kilometres of water. And some fish.

Or rather there isn't. At least not in the Amstrad version (you get all that stuff in the arcades and on the 16-bits, though). We CPC-kids have to make do with a few sharks, divers, robot guards, robo-dogs and fire women. Not that we're complaining. I mean, who really fancies a run in with a spider-bot anyway? Whatever a spider-bot is.

Thunderjaws consists of four levels. Each level consists of two stages. The first stage is set underwater where you have to avoid sharks, other divers and big shooting things. Only the shooting things really present any sort of problem. Once your little swim's complete, there's a big metal door for you to blow away (it takes a lot of shooting).

The second phase is set inside one of Madame Q's fortresses. Here you'll meet robot guards, some women who've had their Ready Brek, and some doggies.

Now here's a question; what on earth have games programmers got against dogs all of a sudden, eh? Apart from *Shadow Dancer*, where the bow-wow was on our side, virtually every game released nowadays (*Darkman* and *Thunderjaws* are just two recent examples) features poor little woof-woofs as enemies. And it's not that they're even rotweilers, alsatians or anything. Just your ordinary common or garden collies, normally. Just like Lassie. And what a sweet, luvverly, chum to people the world over young Lassie was, wasn't he/she/it. Defame Lassie at your peril, programmers.

Meanwhile, back at the game review, here are a few useful tips:



- Most underwater sequences are easy-peasy-lemon-squeezy (in Level Two, for instance, you might as well just point the joystick to the right and go off for a cup of tea or a brisk rub down with a jacket potato).
- In the Level One underwater bit, the only problem comes at the end. You'll need to blow up that gun turret before you can safely start blasting the door.
- The Level Three underwater bit has an end-of-stage guardian. It's a mechanical shark, and it's quite a tricky beast to bump off. Lots of precision swimming required here.
- In the underwater fortress sections, use jump and Fire to leap to the higher platform (which is a lot quieter) when things get hectic.
- The baddies will still be waiting for you when you get down, though!
- Shooting the dogs takes more than one shot, and you'll need to duck down. Jumping over them is safer.
- Duck to avoid the fire of the robo-guards.
- The Level One and Two guardians (mothership and giant three-pipe thing) are crap, and can be seen off without getting so much as a scratch yourself.
- The three-pipe thing takes ages to wax, though. A five minute trip to Boredom City please, Mr Programmer.
- The Level Three guardian (a giant who makes the screen shake when he thumps the floor!) is quite a challenge. Get up really close and try to jump over his fire, whilst rattling your shots in.
- There's a shock in store for you when you despatch the final fiend (Madame Q herself). You'll have to find out what for yourself!





● Underwater fact number three: Most of the end of level guardians in *Thunderjaws* are completely crap. Here's one of them.

And that's about the long, the short and the floppy of it.



Graphics are reasonable, viewed through a letter box window, and sound is OK, though the title tune grates a bit.

The problem is that much of it is just too easy. As with *Final Fight* (see p52), you get enough continues to comfortably get through the first three levels (out of four) on your first go, and should be able to complete the whole thing, given commitment, in a couple of days. Oh well...

Adam P



FIRST DAY TARGET SCORE

Try to finish it!

SECOND OPINION

"It's nice-looking and a bit different. Unfortunately, there's just not enough of a long-term challenge to see it through."

Rod Lawton

THUNDERJAWS VERDICT

GRAPHICS............ 65%
Nowhere near as detailed as most games today.

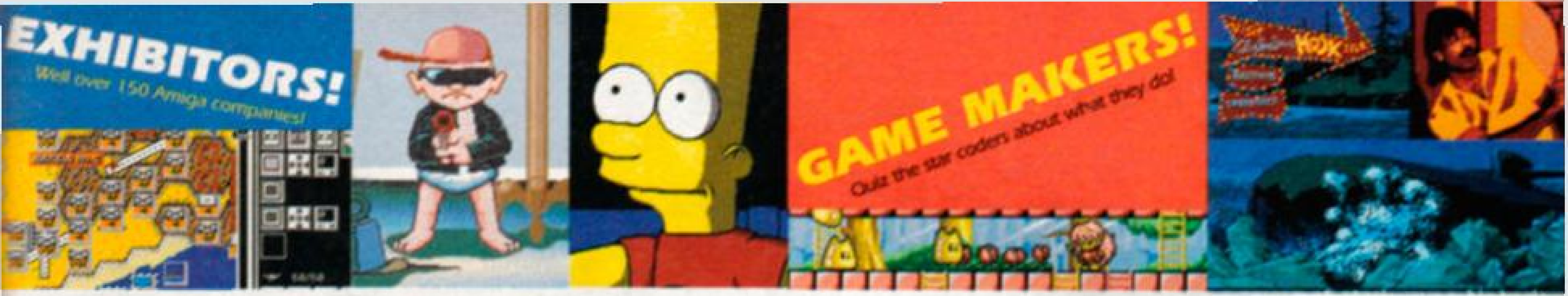
SONICS................ 54%
Pretty mediocre, to be honest. Irritating title tune.

GRAB FACTOR....... 52%
Looks good, but plays like a Type-ins reject!

STAYING POWER... 59%
Finish it and then forget about it.

RATING 63%

Pretty disappointing. Thunderjaws has its moments, but mostly it's just too slow and repetitive.



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You'll think Christmas has come early!



THE JAMES BOND COLLECTION

Compilation

DOMARK ■ £12.99 cass, £19.99 disk

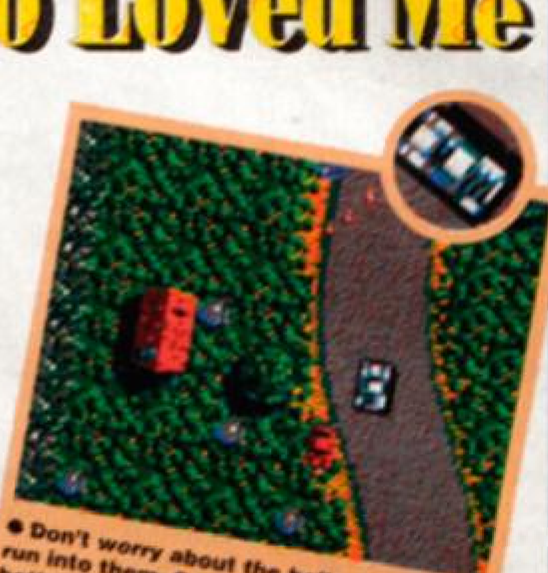
"Ah, Bond. 'M' here. You'll be pleased to hear we'd like you to redo three of your old missions in one go. Here's the details..."

The Spy Who Loved Me

"Quite a recent one this, James, as far as the joystick side of things is concerned. Some submarines have gone missing or something like that, as a result of which you're going to have to chase around all over the place, as if you were part of some crap ZX81 game.

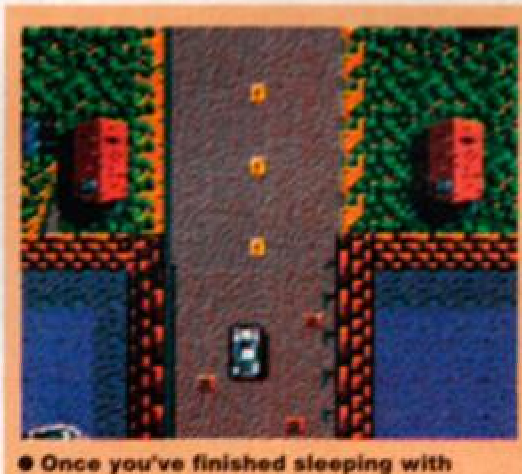
"You'll remember no doubt that it involves driving a tiny car along a bending road, knocking bollards and pensioners aside, and cussing every time the car spins out of control and into a tree for no good reason.

"Of course, if you get far enough you can then do the same thing in a boat. And if you progress even further still you can, er, do it with the car again. I know you didn't really enjoy this much the first time, Bond, but I'm sure you'll see it in a new light now."



● Don't worry about the bollards, just run into them. Secret agents don't bother with the Highway Code.





● Once you've finished sleeping with enemy agents and drinking Vodka Martinis, why not go for a drive?

Licence To Kill

"Admittedly those damnable Hit Squad types offered you the chance to resample this adventure for only four pounds, but that's no reason to turn down this offer of ours.





"Here is the deal James. We'll put you in a helicopter, fly you over a really blocky landscape and see how long you can survive before being shot out of the sky by bullets that you can barely see.



● Once you've shot that car, fly around trying to avoid invisible bullets.

"If you survive that, you can wander around on the land a bit with a gunsight thing floating around in front of you, generally just trying to shoot things. Then you you've got to try and jump from a helicopter to a plane. And then go for a swim. And then do a car chase.

"Got that? All right then, what do you say?"

THE SPY WHO LOVED ME	53%
LIVE AND LET DIE	71%
LICENCE TO KILL	60%

Verdict 59%

"Er, actually I'd rather stay at home and watch Newsnight 'M'."

Adam P

SECOND OPINION

"The games have dated a darned sight better than the films, if you ask me. They're OK, but only for a wet Wednesday afternoon."

Rod Lawton

LIVE AND LET DIE



"This is the one I know you enjoyed, James. Whizzing about in that speedboat of yours, shooting things. All right, so you never actually managed to get past the first stage. You know, that practice stage where you frustratingly had to hit every single one of those targets, otherwise you couldn't actually go on the mission.



● You're going to have to hit every single one of these targets James. It looks hard – it's even harder.

"Perhaps it might seem less than inviting to return to after all these years, but I'm sure you'll enjoy it the second time round as much as you would have done the first time round if you'd actually got anywhere.

"The mission involves helicopters, mines, big guns, and baddies in their boats. All sorts really, with your little boat in the middle of it all, of course.

"Ah, can't you just feel that sea breeze now...?"

Cheat Mode

AA's cheating section is crammed with goodies for those stuck in a game:
● Pokes let you hack into the game code to give yourself extra lives etc. ● Multiface pokes are even easier to use for who own these little black boxes. ● Keypress cheats are put in by programmers to help the playtesters – they're often just there to be found... ● Passwords and solutions are sent in by dedicated gamesplayers who want to share their hard-won knowledge.

Send your tips to: *Cheat Mode, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW.*

QUATTRO RACER

Two for the price of one (the old ones always were the best!) that's just what we have here Andy's first *Quattro* bash of the session. This time *Quattro Racers* gets the treatment with all sorts of delightful cheats.




```
{EoAr} 1·'·Quattro·Racers
{GwAr} 2·'·by·ANDY·PRICE
{FsAj} 3·'
{CwAu} 4·'·ATV·Sim·-·stop·clock
{LlAt} 5·'·BMX·2····-·clock·speed
{AnBk} 6·'·BMX·Freestyle·-·nefarious·oddities!
{AsAw} 7·'·Champ·Jet·Ski·-·choose·course
{FxAi} 8·'
{JqAq} 10·DATA·21,30,6c,11,30
{AnAu} 20·DATA·ac,01,91,01,bd
{AoAt} 30·DATA·b0,21,94,be,22
{CkAr} 40·DATA·6f,ac,c3,30,ac
{MwAt} 50·DATA·3e,01,32,43,5b
{JnAr} 60·DATA·c3,40,00,4f,6f
{KjAr} 70·DATA·4f,4f,b8,a8,a0
{AwAr} 80·DATA·2a,38,bd,e5,ac
{JiAs} 90·DATA·e1,22,2f,be,ad
{FpAs} 100·DATA·21,37,bd,3e,c3
{EiAu} 110·DATA·77,23,3e,23,77
{FoAu} 120·DATA·3e,be,23,77,21
{EpAs} 130·DATA·40,00,e3,11,00
{JwAt} 140·DATA·bb,00,c3,4a,3a
{JpAt} 150·DATA·3e,c3,32,10,66
{LpAs} 160·DATA·21,31,be,22,11
{MxAt} 170·DATA·66,cf,00,00,3e
{LrAs} 180·DATA·02,32,f9,65,c3
{CmAs} 190·DATA·13,66,ff,ff,ff
{KlAr} 200·DATA·21,70,01,11,35
{FnAt} 210·DATA·04,3E,16,CD,A1
{LkAs} 220·DATA·BC,2A,0E,BC,22
{AuAs} 230·DATA·B5,BE,3E,C3,32
{IxAs} 240·DATA·0E,BC,21,9F,BE
{PlAt} 250·DATA·22,0F,BC,CD,00
{BnAu} 260·DATA·01,E5,21,AB,BE
{GvAt} 270·DATA·22,8E,90,E1,CD
{HqAv} 280·DATA·B4,BE,C9,F5,AF
{BmAt} 290·DATA·32,1E,4C,F1,C3
{IqAr} 300·DATA·00,04,CF,00,00
{CrAr} 305·MEMORY·&2FFF
{BxBj} 310·MODE·1:PRINT"Quattro·Racers"
{JqAx} 320·PRINT·TAB(13)"by·ANDY·PRICE"
{OiAt} 330·PRINT"1.·ATV·Simulator"
{ArAu} 340·PRINT"2.·BMX·Simulator·2"
{AxAw} 350·PRINT"3.·BMX·Freesytle"
{FkBk} 360·PRINT"4.·Championship·Jet·Ski"
{NvAs} 370·PRINT:INPUT"Number";jp
{AtAu} 380·ON·jp·GOTO·490,400,530,580
{HuAn} 390·GOTO·310
{LsAp} 400·RESTORE·10
{JkAr} 410·FOR·x=&BE80·TO·&BE9B
{KrAw} 420·READ·a$:POKE·x,VAL("&"+a$)
{JpAs} 430·NEXT:LOAD"BMX2",&6C30
{KkBj} 440·PRINT"Clock·Speed·(1·is·fast)"
{IiBi} 450·PRINT·TAB(13)"(5·is·normal)"
{OnAv} 460·PRINT·TAB(13)"(255·is·slow)"
{FlAv} 470·INPUT"Enter·Speed·Value:",v
{KsAt} 480·POKE·&BE95,v:CALL·&BE80
{CqAq} 490·RESTORE·200
{LoAq} 500·FOR·x=&BE80·TO·&BEB6
{OoAw} 510·READ·a$:POKE·x,VAL("&"+a$)
{GkAp} 520·NEXT:CALL·&BE80
{GoBl} 530·MODE·1:PRINT"Keypress·Cheat:":PRINT
{KuAx} 540·PRINT"Redefine·each·players";
{OkAr} 550·PRINT"·name·as:":PRINT
{DoBn}
560·PEN·2:PRINT"TAEHC·('CHEAT'··reversed)"
{MqAl} 570·RUN""
{DkAp} 580·RESTORE·80
{BsAr} 590·FOR·x=&BE80·TO·&BE38
{MjAw} 600·READ·a$:POKE·x,VAL("&"+a$)
{NwAr} 610·NEXT:LOAD"jetski"
{EqAu} 620·INPUT"Start·Course·(0-8)";tr
{NoAu} 630·POKE·&BE32,tr:CALL·&BE80
```

NEW KIDS BLOCK

If it's worrying you that the pokes in *Cheat Mode* just look like a jumble of signs, squiggles and numbers to you, fear not, that's just what they are! They're programs written by specialists to take the control of loading function, alter, and then start the game. What you will need to do, should you want to use one, is:

1. Make sure the routine is written for your format – disk or tape – they will not generally work with both.
2. Type it in to the computer, making sure there are no errors.

● *Typing in routines is always prone to errors, so here's some help:*

The funny numbers within the "{ }" brackets on the left of the lines are NOT to be typed in but are a code produced by the TYPEWRITER program printed periodically in Amstrad Action. (it was on the covertape with AA67 and AA68). It checks each line as it is typed in and produces a code which can be compared with that printed. You don't have to use the TYPEWRITER program, but it's recommended.

All SPACES in the lines have been replaced by printed dots, the idea being that it makes them easier to see. See a DOT? Type a SPACE!

Quite often the routine itself will have a built-in check on the DATA numbers and will tell you if one of them is typed in wrongly. User-friendly or what?

3. Save the program to tape or disk (not the game tape or disk!) so that it can be used again.
4. Put in the game tape or disk and type ITAPE or IDISC.
5. Type RUN to run the routine (not RUN "" (CTRL+ENTER) as you normally would)

You should find that the game will load normally, or you will be given instructions on what needs to be done.

Multiface poke for Quattro Racers

Address	Poke	Effect
BMX Freestyle		
1456	00	Qualify
1480	00	on
1481	00	each
1482	00	event
148F	00	
BMX Simulator 2		
5B43	No	Timer delay
ATV simulator		
4C1E	00	Inf. time

QUATTRO CARTOON

Andy (I'm going to do every *Quattro* Compilation if it kills me) Price has doubled his usual good deed this month by providing us with two more complete cheats for Codemasters *Quattro* packs. *Quattro Cartoon* is second. There are lots and lots of cheats crammed into the routine – multiface, keypress, you name it, Andy's already thought of it, hacked it, and sent it.

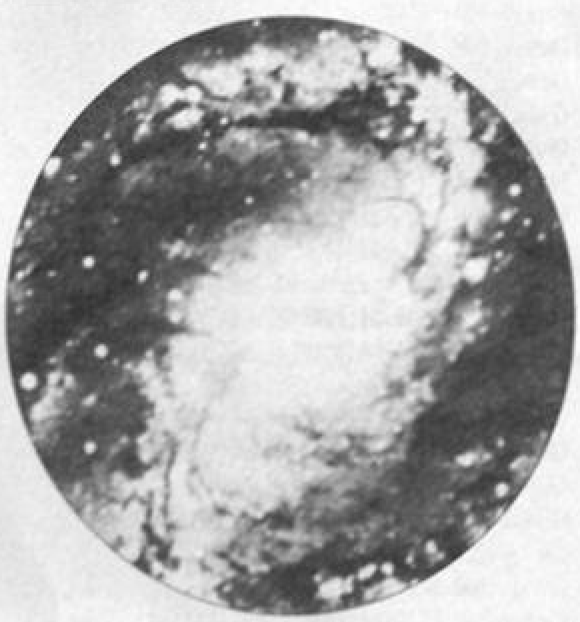
```
(IlAq) 1·'·Quattro·Cartoon
(GwAr) 2·'·by·ANDY·PRICE
(FsAj) 3·'
(AjAr) 4·'·Frank·Jnr:·No·Ghosts
(GIBm) 5·'·Wizard·Willy:·Inf·lives·&·Firepower
(LxAv) 6·'·Little·Puff:·Invulnerability
(NiAs) 7·'···············and·move·location
(AxAv) 8·'·Ollie·&·Lissa:·No·Ghosts
(GiAj) 9·'
(LpAq) 10·DATA·2a,30,bd,e5,ac
(EoAr) 20·DATA·e1,22,2c,be,aa
(GxAr) 30·DATA·ab,21,37,bd,3e
(DnAt) 40·DATA·c3,77,23,3e,23
(MqAr) 50·DATA·77,3e,be,23,77
(GpAs) 60·DATA·21,40,00,e3,11
(JmAq) 70·DATA·00,bb,c3,4a,3a
(NpAs) 80·DATA·af,32,05,5d,ee
(AlAs) 90·DATA·41,ee,50,cf,00
(FuAr) 100·DATA·af,32,1c,1c,32
(NmAq) 110·DATA·4c,1d,00,cf,00
(PvAr) 120·DATA·00,00,0a,00,0a
(CqAt) 130·DATA·21,de,7f,22,4b
(DwAr) 140·DATA·00,21,10,0e,22
(EwAt) 150·DATA·70,00,10,22,21
(AxAt) 160·DATA·ec,7f,11,00,fc
(AoAs) 170·DATA·01,0a,00,ed,b0
(NxAr) 180·DATA·c3,4d,fc,3e,c9
(LoAu) 190·DATA·32,60,63,01,0d
(GrAt) 200·DATA·7f,10,69,00,00
(BvAt) 210·FOR·x=&BE00·TO·&BE2E
(JkAu) 220·READ·a$:a=VAL("&"+a$)
(FqAt) 230·POKE·x,a:NEXT:MODE·1
(PpAs) 240·MEMORY·&2FFF:PEN·1
(HxAr) 250·PRINT"1. Little·Puff"
(EuAt) 260·PRINT"2. Wizard·Willy"
(FuAw) 270·PRINT"3. Frankenstein·Jnr"
(PlAx) 280·PRINT"4. Ollie·&·Lissa·III"
(PtAr) 290·PRINT:INPUT"Option";n
(NpAt) 300·ON·n·GOTO·320,390,430,440
(NxAt) 310·RESTORE:CLEAR:RUN
(PqAx) 320·CLS:PRINT"Keypress·Cheat:"
(IjBi) 330·PRINT:PRINT"Press·Keys··";:PEN·2
(PvBp) 340·PRINT"D·R·A·G·O·N";:PEN·1:PRINT"·
       all·together"
(DtBj) 350·PEN·1:PRINT"Gives·Invulnerability"
(BtBl) 360·PRINT"Also,·Press·SHIFT·Plus·Arrow"
(EkAw) 370·PRINT"Keys·To·Move·Location"
(KuAl) 380·RUN""
(EvAq) 390·RESTORE·100
(FxAs) 400·FOR·x=&BE23·TO·&BE2E
(ImAw) 410·READ·a$:POKE·x,VAL("&"+a$)
(DnAv) 420·NEXT:LOAD"wiz":CALL·&BE00
(HoAu) 430·LOAD"frank·jnr":CALL·&BE00
(HmAq) 440·RESTORE·130
(ItAt) 450·FOR·x=&7FD0·TO·&7FF5
(DvAx) 460·READ·a$:POKE·x,VAL("&"+a$)
(EkAt) 470·NEXT:LOAD"candlelight"
(NkAp) 480·CALL·&7FD0
```

Multiface pokes for Quattro Cartoon

Address	Poke	Effect
Ollie and Lissa 3		
6360	CA	No ghosts
Frankenstein Jnr.		
70C0	00	No ghosts
Wizard Willy		
1C1C	00	Inf. lives
194C	00	Shoot faster

CAPTAIN BLOOD

Not a new game, but something of a classic in its own breakfast cereal *Captain Blood* – this one is on the *Special Action* (disk, I think) compilation. Of course iiiiit's Johnny, from across the sea in Belfast, seeking out the unbelievably difficult games and seeing them off in style. This time he supplys infinite time to find the numbers that count.



```
(HpAs) 1·'CAPTAIN·BLOOD·hack
(KoAw) 2·'(Special·Action·version)
(DoAp) 3·'By·John·Girvin
(PsAn) 4·'January·1991
(FuAj) 5·'
(JwAr) 10·OPENOUT"d":MEMORY·&5FFF
(JjAr) 20·CLOSEOUT:MODE·1
(MuAs) 30·LOAD·"!blood",&6000
(CwAq) 40·addr=&BE00:RESTORE
(HmAn) 50·READ·byte$
(GuBj) 60·IF·byte$="BLOOD"·THEN·CALL·&BE00
(JjAs) 70·POKE·addr,VAL("&"+byte$)
(BmAr) 80·addr=addr+1:GOTO·50
(OuAv) 90·'***·LEAVE·ALL·LINES·IN·***
(MtAw) 100·DATA·f3,21,00,60,11,94,90,01
(JxAv) 110·DATA·92,0f,ed,b0,3e,c3,21,a0
(OwBi) 120·DATA·be,32,16,bd,22,17,bd,c3
(NlAx) 130·DATA·94,90,a4,40,4c,46,01,5b
(MiAw) 140·DATA·2.,af,be,22,4f,a5,21,00
(JnAw) 150·DATA·00,22,4c,a5,c3,00,a5,dd
(MnAu) 160·DATA·21,fc,a7,11,ca,00,cd,0b
(MqAv) 170·DATA·a7,21,c2,be,22,c4,a0,c3
(LrAx) 180·DATA·33,a0,af,32,0b,49,c3,00
(GlAp) 190·DATA·40,BLOOD,4A
```

Multiface poke for inf. time

Poke 490B with 00

NARC



Richard Harris (of Camelot... *only joking*) of Hemel Hempstead has found the ideal cheat for the Ocean Game *Narc*, all you have to do to attain infinite lives is to redefine the keys as G,R,U,N,T,S. Well done Richard... have a prize.

IRON MAN

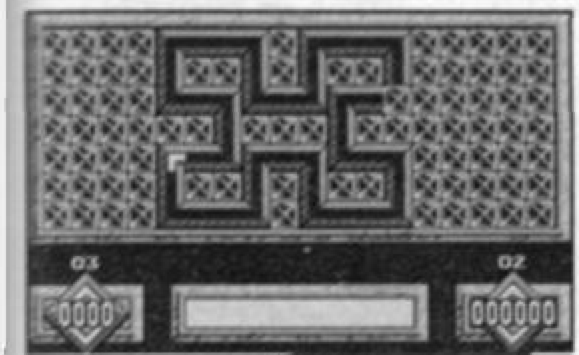
Gary Mercer of Prescot in Merseyside has suggested a way of spending in *Ivan "Iron Man" Stewart Off Road Racer*, which seems good value. See how you get on...

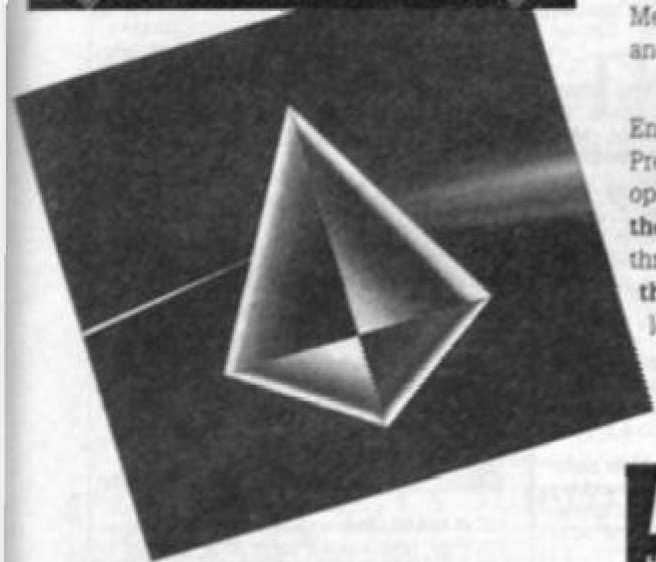
- Choose the keys as normal
- Start the race
- Try to win
- If you win you get $100,000 to spend
- Buy 1 nitro and 1 top speed
- You now have $190,000 (YIPPEE)
- Spend $100,000, don't buy a top speed though
- You have $90,000 left (ARGHH)
- Buy another top speed and you get $190,000

Spend wisely, though – this only works the first time in the shop.

LOOPZ

Simon Warford of London and Craig Davis from Aberaman have been driven to distraction (but loved every minute of it) finding the passwords for Audiogenic's game *Loopz*.





5 - EASY
10 - ARTY
15 - FOXY
20 - CRAS
25 - WHET
30 - POLL
35 - ZUIS
40 - VEST
45 - EMMA

HERO QUEST

Ian Williams of Nazeing (sounds like it might have a peculiar pronunciation) is first in with a cheat for the Mastergame *Hero Quest*. Follow his method to ensure good health, riches and weaponry:



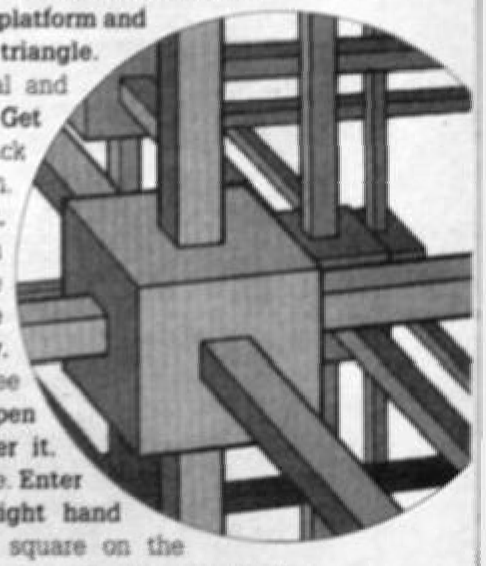
1) At the beginning of each quest save all the characters
2) Begin another quest, but do not leave the room with the stairs
3) Using the healing spells, heal any ailing characters
4) Search the room
5) Exit the room via the stairs
6) If necessary buy weapons or armour
7) Repeat step 1
8) If necessary repeat from step 2 (any number of times)

It can be quite time consuming, but very worthwhile.

3D CONSTRUCTION KIT DEMO

Just in case you haven't quite managed to complete the *3D Construction Kit* demo on *AA* cover tape 5, here is the solution from Kamil and Marc Mehmet of Poplar, Michael Twose of Bedford and James and Rory Driscol of Cottesmore.

Enter the house. **Go to the Computer room.** Press "A" on the keyboard to make the teleport operational. **Leave the room and turn right then right again.** Along the corridor and down through a trapdoor. **Along the corridor and into the room at the end.** Shoot the pyramids to the left and right. **Collect the Safe combination.** Leave the house by the route you came in. **Go into the door opposite.** Shoot the wall (it lifts up) and go through the door on the far wall. **Shoot the Nose of the evil face.** Back into the teleport room. **Press "F" and enter the teleport.** Look for the triangle and shoot it to remove the Force field. **Go through the door on the right, press "P" to look up.** Shoot the rail holding the block until the block moves over the tower. **Shoot the block to crush the tower.** Go through the door on the left. **Shoot the stairs one by one and enter the door at the top.** Walk along the path and enter the next door. **Go down the steps and look behind them.** Shoot the triangle. **Stand on the platform and shoot the other triangle.** Locate the safe dial and press "A" to open. **Get the exit pass.** Go back to the teleport room. **Enter the teleport.** Look up the palm tree and shoot the coconut. **Activate for extra energy.** Climb the palm tree and get the key. **Open the chest and enter it.** Go back to the house. **Enter the door in the right hand wall.** Activate the square on the right hand wall. **Watch the final sequence.** Now do it all again and collect the coins. **AA**



MULTIFACE MADNESS

Here, as promised, is the second and final reading from the book of pokes from Darlington's mystery Multiface man (or woman)... come on! own up! I know you're out there somewhere...

NAME		ADDRESS	POKE	EFFECT
Jungle Warfare	(t)	3867	00	Inf. lives
		801A	00	Inf. bullets
Killer Ring	(t)	1208	C9	Invulnerability
Light Force	(t)	79DA	00	Inf. lives
Lord of the Rings	(t)	417F	8F	Inf. health
		41CC	B3	Inf keys + arrows
Mag Max	(t)	1AC1	C9	Invulnerability
Mazie	(t)	8800	00	Inf. lives
Miami Vice	(t)	0352	A7	Inf. energy
Mission Genocide	(t)	A0C7	C9	Invulnerability
Moon Buggy	(t)	8438	No	Zone number
Mutant fortress	(t)	0798	A7	Inf. lives
Navy moves	(t)	048C	BE	Inf. lives
Netherworld	(t)	27BF	00	Inf. lives
Nodes of Yesod	(t)	4EA7	00	Inf. lives
Revolution	(t)	071A	00)	Inf. lives
		071E	00)	
Rogue Trooper	(t)	3554	00	Inf. medi-kits
Skweek	(t)	72A0	C9	Invulnerability
Stormbringer	(t)	16C7	No	Starting position (0-34)
Tombstowne	(t)	90C3	00	More energy
Tomcat	(t)	93F6	A7	Inf. lives

Using the Multiface...

The (t)s and (d)s before the address indicate whether the poke was written for a tape or disk game (they might work on both, its worth a try). Just in case you don't already how to put in these BLACK BOX POKES, here are the steps to success.

a) Load the game as normal.
b) Press the RED button on the MULTIFACE.
c) Press "T" for tool.
d) Press "*" to make sure you select the code.
e) Press "H" for HEXADECIMAL input.
f) Press "SPACE" for input.
g) Type in the ADDRESS (4 characters ie. 3A7C)
h) Type in the POKE (2 characters ie. A7)
i) Press "RETURN"
j) If there is more than one poke goto (f)
k) Press "ESC" back to the menu.
l) Press "R" return to the game.

AA SMALL ADS

For Sale

AMSTRAD CPC 464 colour, tape deck, 150+ games, manual, joystick, over 100 magazines. £200 o.n.o. MP-3 T.V. Modulator, £35 o.n.o. DMP2000 Amstrad printer, boxed, new ribbon cable, £75 o.n.o. Phone Barry, (0373) 63713. Weekends or after 5pm week-days.

£200 o.n.o. Amstrad 464 green screen monitor, 1 joystick, new disk drive, colour modulator. £150 worth of software. 3D construction kit, games, Gauntlet 2, Midnight Resistance, Out-Run 720 Degrees. Tel: (0733) 236947.

DEVPAC DIS/ASSEMBLER, £20, 464 Operating System Firmware Spec, £20. Ditto DD1 Dos Rom, £10. Mini Office 2, £12. Amstrad Action complete from May 1988 to December 1990. Offers? (0252) 541023.

CPC6128, disk drive + colour monitor, DMP 2000 printer + paper and ribbons, cassette recorder, TV-tuner for monitor with aerial, word processor + blank disks + games + joystick, dust covers only. £349 o.n.o. Phone Laurence (0732) 850721.

CPC6128 green screen, system disks, user manual, Konick joystick, keyboard, dust cover, TV Modulator, games: Vigilante, Turrican, P47, Space Harrier II, Star Wars Trilogy, Action Fighter. Boxed with instructions. £300. Phone Cyril (0322) 336596 weekends.

AMSTRAD 6128, and colour monitor, Multiface 2, joystick, Cheat Modes 2, plus over 50 original disk games, and disk-box + cassettes. Superb value over £1000. Sell for £450. Tel: Steve. Darlington. (0325) 377889.

AMSTRAD 6128 colour monitor, DMP 2160 printer, cassette, advanced art studio, mouse, joystick, over 200 games, manuals worth £1100. Will accept £600 o.n.o. Tony Kelsey. (0474) 359465.

CPC 464 COMPUTER, colour monitor, speech synthesizer, joystick, many games, books, magazines, manual. £140. Also Nintendo Gameboy with Tetris, Super Mario, Double Dragon and Turtles. £70. Tel: York (0904) 642410. Buyer collects.

6128 colour Dot Matrix MP-135 cassette player, Micro Word, Pen Down, Light Pen, Multiface 2, Matrix, Spread Sheet, editor, Stop Press, Mouse, Advanced Art Studio, plus some games. £450. Tel: Steve (0756) 72623.

CASSETTE GAMES for sale! Over 115 games on offer, (all original Amstrad tapes), for a third of their original price. For full games list: phone Chris on (0233) 630262.

CPC464, mono monitor. £300 worth of games. £600 new. Sell for £240. Contact Stephen on (0353) 862284 after 6pm and only on weekdays.

CPC6128 green screen Multiface II, 2 joysticks, data cassette recorder, loads of games on disk and tape, magazines. Altogether worth £500+, sell for £350 o.n.o. Contact Jonathan on (0352) 763791.

AMSTRAD DMP2000 printer plus manual, dust cover and spare ribbons, very good condition. £95. Phone Roger 081-890 5719. Heathrow airport area.

CPC6128 colour monitor, AMX mouse and art, tape recorder. £300+ of software on disk/tapes, from games to business. £400. Contact Ian Bone (0563) 820567 (30 miles South of Glasgow).

AMSTRAD CPC464 for sale, over £300 worth of games, two joysticks, lots of AA's worth over £500. Wanted for quick sale. Call Neil (0259) 51313. £150 or nearest offer.

CPC6128 colour monitor, tape recorder, joystick, £600+ worth of games, including Golden Axe plus Office Program. Excellent condition for £300 o.n.o. Tel: (0795) 479456 after 7pm.

CPC6128 computer, colour monitor, Epson LX400 printer, manuals, paper, ribbons, joystick, Mini Office II, games, Elite, Lurking Horror etc. Total value £700 will sell for £300. Phone Dave 071-254 4916 after 7pm.

CPC6128 colour monitor, Multiface, tape recorder, joystick, printer, covers, manuals, lots of games, utilities on tape and disk includes desk. £395 o.n.o. (0243) 543545. West Sussex.

CPC464 mono monitor, disk drive and modulator, comes with 30+ games and Mini Office II. £150 o.n.o. Telephone Derek on (0227) 454109.

CPC6128 colour, two year guarantee DMP2000, Multiface AMX mouse, Speech Synthesizer second 31/2" disk drive Amdrum, loads of games worth £2000. Accept £700 o.n.o. Phone after 6pm (0226) 204490 (Barnsley). Ask for Lee.

CPC6128 colour monitor, joysticks, manuals, Multiface II, cassette recorder. £250 worth of software, disk and cassette including Brunword word processor, OPC Art Package with mouse, games. Price £350. Phone Steven (0380) 727265.

AMSTRAD CPC6128 disk drive, colour monitor, TV Tuner, joystick, over 50 games, Multiface, Light Phaser, Mini Office 11 tape deck. £370 complete package. Phone (0527) 546989.

CPC464 plus colour monitor, over 50 games only 7 months old, worth £450, will sell for £300. Phone (0536) 204467, ask for Paul.

AMSTRAD CPC6128, 100+ games, 30+ disk, Modulator, mouse, art package, tape deck + lead, Multiface II, 2 joysticks, 6 blank disks, joystick, Splitter, over 30 previous AA's. Phone Tim (0889) 565102 after 4pm. £250 o.n.o.

CPC464 with green monitor. New parts and therefore in very good working order. New joystick, 30+ games (sports, Mini Office 2) etc. All for £110. Phone Alan on (0322) 554696.

GAMES! Tapes and disks (including Rainbow Islands and Teenage Turtles). Telephone: (0359) 269453 after 5pm) Hurry! Hurry! Hurry! (P.S. Hiya Moyns!)

AMSTRAD 6128 colour monitor, disk drive, cassette player, £500 software; business programs, games, assemblers, utilities, etc. Numerous manuals, 70 magazines, worth £1200, sell for £300 o.n.o. Phone (0522) 529726 evenings.

CPC464 mono with lightgun, joystick, 100+ games worth £500+ including all Dizzy's, Rick Dangerous II, 3D Construction Kit, Champions and many more. All originals, good condition, only £200. Phone Stephen (0223) 262536.

CPC6128 colour monitor, speech synthesiser, mouse, Multiface II + Insider, loads of software: Sim City, Bloddwych, Rick Dangerous 2, Lords of Chaos, Advanced OCP, Art Studio, joystick, manuals, magazines, £200 o.n.o Tel: (0989) 82518.

CPC6128 colour monitor, joystick, manuals, AA magazines, over £200 worth of disk games, all top titles + Advanced Art Studio, all in excellent condition. Price £350 o.n.o. Phone Richard (0844) 53410 anytime.

CPC6128 colour monitor, Multiface Two, Datel Synthesiser and stereo sound, booster joystick and over 90 games on disk. £350 o.n.o. Amstrad DMP 4000 printer + lead £120 o.n.o. Colin (0332) 517439 Derby.

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Wanted

BEEBUGSOFT 'Disk Demon' for CPC 6128 needed desperately! Phone Ron Tait. (0623) 883213.

Services

PERSONAL help with CPC computer and listings, some from 1985. Enquires from abroad welcome. Write to Angela Allum, P.O. Box 116, Bracknell, RG12 4PQ. (Add England if writing from overseas).

User Group

NEW MAG! Coming soon! "(free)" order for your new mag! Phone after 6pm at (0325) 350279 for your orders. Hear from you soon!

AA SMALL ADS

This section offers you a really cheap and effective opportunity to speak direct to 30,000 CPC owners – or would-be owners. You can place an ad up of up to 30 words for just **£5**. So you could use it to sell a printer, launch a user group or advertise a piece of software you've written. (One thing you can't advertise is the sale or swap of software. Such ads can be used by pirates.) Fill in the application form and send it to us together with payment. We'll place the ad in the next available issue (published 2-7 weeks after we receive your order).
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Balrog



The Balg takes a break from tanning himself on an LA beach (*yeah, managed to slip that in, didn't you – ed*) to bring you yet another adventure packed column full of your regular favourites...

Flook

£3 cassette, £5 disk • WoW Software • 78 Radipole Lane, Weymouth, Dorset DT4 9RS

This game is strange – very strange! You start in a small dark attic playing a game on your computer when suddenly a giant bug crashes through the skylight and eats your computer whole! Later in the game you'll encounter an Aspidistra reciting Richard III, the Balrog-throwing champion of Magdawouk (*Grrr! – Balg*) and many other weird and wonderful characters. Aided by your pet flea, Pedro, you (Heronimus Flook) must seek out and rescue Vile Narcilcrisis who was captured by an evil wizard.

Aided by your pet flea, Pedro, you (Heronimus Flook) must seek out and rescue Vile Narcilcrisis who was captured by an evil wizard...

Written by David Oya and originally published in two parts in 1986, *Flook* is a *Quilled* game with no graphics. The whole thing reminded the Balg of a game called *Mural* in which lots of quirky, totally illogical happenings beset the player for no obvious reason. Although *Flook* has more logic than *Mural*, this logic is still a bit tenuous in places (you have to scare off a elephant-sized geranium by dropping a clockwork mouse, for example!)

But is the game any good? Well, the Balg was initially put off with said bug (that's the giant bug and not a bug in the game) right at the start – I was totally stuck! However, once I eventually worked out how to escape (with a little help from the solution) I found that the game was quite large and amusing in places. However, the puzzles in certain parts are a bit illogical and the parser unfriendly, so it can be a very frustrating game. Apart from the poor start I liked it, but as with one of WoW's previous releases, *Simply Magic*, it is an acquired taste, you'll either like Mr Flook and Pedro or not – worth trying, though!

ATMOSPHERE	63%
INTERACTION	50%
CHALLENGE	65%
OVERALL	**63%**

NEWS...NEWS...NEWS...

JPD finished...

Following the news item in *AA71* concerning problems with JPD, Justin Boniface (the man in charge), has written to apologise – JPD is now officially closed. Justin assures me all tapes have been returned and he is sorry for any inconvenience he has caused. The message here is PD libraries require a lot of work (just ask Alan Scully or Debby Howard). Don't set one up unless you intend to run it for a while.

PD Newsletter launched

Dragon News is the PD newsletter for Adventure PD, written by Lady of Adventure Debby Howard. Issue one is out now, complete with a listing of all of Adventure PD's PD, a map, letters and a couple of reviews. For a free copy just send an SSAE to Debby Howard at 10 Overton Road, Abbey Wood, London, SE2 9SD.

Contacting the Balg

The Balg is desperate for new contributions to the Cluepot and Just for Laughs sections – to get in contact with him, write to: **The Balrog, Amstrad Action, Future Publishing Ltd, Beauford Court, 30 Monmouth Street, Bath, AVON BA1 2AP.**

Lords & Ladies of Adventure

Redhawk
Lars Arell, Angsrogatan 1B, 554 39 Jonkoping, Sweden

Al-strad • Astral Plain • Book of the Dead • Federation • Hermitage • Imagination • Teacher Trouble • Tealand
Peter Knowles, 102 Standhill Crescent, New Lodge, Barnsley, South Yorkshire S71 1SS. Tel: 0226 292141

Big Sleaze • Lord of the Rings • Not a Penny More Not a Penny Less (part 1) • Quest for the Golden Egg-cup • Shadows of Mordor
Brendan "Legolas" McGoldrick, 14 Curley Hill, Strabang, County Tyrone, Northern Ireland BT82 8LP

Adult 2 • Al-Strad • Boredom • Burlough Castle • Can I Cheat Death? • Doomlords I-III • Druids Moon • Dungeon • Firestone • Jason and the Argonauts • Magicians Apprentice • Project X (Microman) • Roog • Spacy • Stryptiche • Welladay
Mark Wake, 2 Oatland Close, Little London, Leeds LS7 1SW

Big Sleaze • Gremlins • Megabucks • Seabase Delta
Darren Sharp, 10 Alfred Road, Greatstone, Kent TN28 8SH

Questprobe 3
Rich Thomas, 85A St. Johns Road, Cannock, Staffs, WS11 3AL. Tel: 0543 503045, Mon-Fri, 5-10pm

Colour of Magic • Forest at World's End • Gnome Ranger • Heroes of Karn • Rebel Planet • Questprobe • Seabase Delta • Subsunk
The Dragon Master, 12 Gretton Crescent, Aldridge, Walsall, West Midlands, WS9 0DY

Knightmare
Ross Younger, 3 Cammo Parkway, Edinburgh, EH4 8EP

Balrog's Cluepot

This beefy collection of clues is brought to you by the following wise adventurers: Mayur Maha, Chris Morgan, Dave Cox, Pamela from Colchester, John-Lee Barber, Alexander Vitoratos, Benjamin Lomax, Daniel Pooley, Edmund Spicer, Amir Mansour, Thomas Christie, Gandalf the Wizard, Brendan 'Legolas' McGoldrick, Jay Honosutomo and Adrian Forbes.

Adventure Quest
Reach and get the orchid by standing on the table. When you have the orchid feed it to the unicorn.

Al-Strad
- Wear arm bands.
- Eat coconut.
- Note code number to open safe (it changes with each game).
- Eat pill for invulnerability in maze.

Arnold goes to somewhere else
Drop the goat at the python pit.

Bard's Tale
- If found use the conjurstaff – it halves the spell point cost of conjurer spells.
- Flame and frost horns are better than the fire horn.
- Sell the eye when no longer needed.
- If it is night and you want it to become day just save and load the game again.

Dungeon Adventure
- Drop the poppy pod outside the nest to scare the bird away.
- Climb the tree on the far side of the forest and throw the berry to scare off the giants.

Hobbit
- When you meet the goblins, go straight north, wait three times and then go south.
- When you meet Elrond give him the map and tell him to read it.

Holiday
- Examine wardrobe.
- Give egg to swan.
- When at the bridge insert handle in hole and then turn handle.

Leather Goddesses of Phobos
- Give back the assassin's sword.
- To kiss the frog, hold ears with hands, plug nose with pin, wear lip balm and close eyes.

Necris Dome
- Spray the aerosol.
- At the start get the axe, enter casket, get gloves, push, Ex4, S, type "MOVE CIRCUIT", now type "PUSH BUTTONS".
- To destroy mandroid in chamber 11, throw it down refuse disposal.

Pawn
Buy the whisky and the beer from H. John. When you climb up the thin shaft at the Lava River, drop all except white then put white in pocket before you climb, this allows you to get white later on.

Shadows of Mordor
Make sure you catch a fish at the lake. Tell Faramir you're a hobbit. Give the fish to Smeagol at waterfall. Drop the bread to get past the wolf.

Simply Magic
- Everything that you do in the room of be derment must be done backwards (i.e.'drop' becomes 'get', 'get' becomes 'drop' etc.)
- Put the unicorn hairs into the lute to make it playable.

Sorceror
- Put the matchbook in the brass receptacle before the postman arrives.
- Pay the Tral gnome then search him!
- Drop the bat guano in the cannon.
- Lower the flag and examine it.
- Drink the aqua potion and then bash the bunnies.

Red Moon (esp for Chris Godfrey)
- Wear the bracers to be able to carry more.

BALROG'S POSTBAG

Big book of adventures?

Is there a book of adventure like the *Cheat Mode* compilation I & II?

Peter Seifert
Germany

Adventure clue books do exist, but they are usually for individual games and are often quite expensive. Both Adventure Probe (Tel: 0492 77305) and Adventure PD (Tel: 081 310 9877) offer a solution service however as well as being able to help you with most adventure queries.

The Rochdale Balrog...

Have you really been torturing Rod? (doesn't he know *CPC Computing* had to close due to chronic staff shortages following a visit by the Balrog!)

Could I suggest that you try to put more news, reviews and letters in (*AA66*'s column was just other people's work and more for reference than a good read!) Could you also please but an adventure game on the covertape – after all, £2.20 for three pages is a bit hard on the dedicated adventurers who read your column.

Also, in an advert by Zenobi Software in *Adventure Probe*, I noticed some games written by a person calling himself 'The Balrog' (48K Spectrum games I hasten to add). Is this an impostor?

Simon 'Aragorn' Netherwood

Rod has not yet been tortured yet as he is still promising that there will be an adventure on the covertape soon, however the Balg has started sharpening his torture implements in case one doesn't appear!

I agree that there wasn't much in AA66 – at the time I had a load of exams to study and pass and couldn't give the time that I would have liked to writing the column. Sorry but the same shouldn't happen for another year!

As to the Rochdale Balrog – no he is not an impostor, just a distant relative!

Ask away

I pay homage to your great articles in *AA*. Especially the *Cluepot*, which has helped me many times. But I have a few queries that I would like you to answer:

1. The Lords and Ladies of Adventure section which does a tremendous job to the public at large does take up a lot of space. If you included it every second month you could fill the left over space with more reviews, clues etc.
2. I totally agree with the person who wrote in, in *AA60*, to say that an adventure should be put on one side of the Birthday and Christmas cassettes.
3. Could you tell me where I could get old games such as *Hollywood Hijinx* and *Suspect*. I only came into the computer scene a few years ago and I missed out on all these great adventures.
4. My last point is, why doesn't *AA* put some adventure games on the *Amstrad Action* Mail Order pages?

Oliver Nally
Limerick

1. I feel that the Lords and Ladies are an important feature of the Balrog column but I do try to keep the space taken by it as small as possible whilst trying to include it every month – I have talked to many adventurers who believe it to be a lifeline, but if enough people want the Lords & Ladies only to appear once every two months then I will follow popular demand.

2. An adventure should appear on covertape very soon...

3. Infocom games are like gold dust nowadays. Your best bet is to try the classifieds or phone Nic Rumsey's Infocom swap line on 03212 2737. Good luck – you'll need it!

4. We have in the past! However, as you might have noticed there is a lack of commercial (as opposed to home-brew) adventure software around, so there isn't really much to put in the mail order pages! However, I'm sure that if a good commercial adventure is released AA will feature it in the mail order pages.

Bulk solution

Could you print an adventure hints/solutions index similar to the one found regularly in *Cheat Mode*?

Iain McCarthy
Essex

Well, the last Cluepot index was printed in AA57 so it's about time I printed an update – see this month's section.

- Drop the chalk in the acid pool.
- Wear the gloves to pick up the sword.
- Eat the mushroom to be able to go through the tiny door.
- Wear the cloak to stop the statue from attacking.

Redhawk

Lars Arell from Sweden has come to the aid of Chris Morgan and his problems:

- You must carry the book in order to find the sewers.
- Go to Heath Station, go down, W, up, up to find the bomb. To get back to the heath station, go down, east and up.
- The librarian does not answer all questions. However, he is able to answer if you SAY "I WANT TO KNOW ABOUT THE PROFESSOR".

Atalan

Peter has also solved Simon's problem in this game. He has to cut bamboo with axe, get bamboo and then build raft. You must have the hammer (from the Goldmine) and nails (from the Tumbledown Hut) to do this.

Firestone

Harrison Sword from Swindon has come to Pervez Chondbury's aid: To cross the chasm you must wear the running shoes and CROSS PLANK. You are unable to talk to the knight in the field – he has other uses!

Warlord

Peter Clarke from Ipswich has the solution to Simon Avery's problem:

Initially you should have the sword which is given to you when you sleep by the lake. You should have killed the ox with the sword and then taken the rope which tied the ox. Then just wander around until the Roman soldier attacks you and then attack him. He will then run away. When you next find him, capture the Roman and take him to the Druid. He can then be exchanged for the amulet. **AA**

Cluepot Index...

RE-RELEASES... RE-RELEASES...

Shinobi
Mastertronic • £3.99



• *Shinobi* is the latest ninja game to battle its way into the budget charts. AA says: "Er, pretty good actually."

There's corking shuriken-tossing ninja beat-em-up action in this excellent coin-op conversion. The plot's a bit daft – something to do with a kindergarten class being kidnapped by an evil mob – but the action is hard to fault. You have to wander round battling gun and fist-toting bad guys and rescuing the sprogs. Excellent. **84%**

The Untouchables
Hit Squad • £3.99

When we first reviewed this, we called it "an Oscar-winning film licence". Two years on, it's lost none of its original appeal. It might look pretty naff from the screen shots (it's all in blue!), but behind that uni-colour facade lies an excellent and varied game, with shades of *Switchblade*, *Operation Wolf* and *Green Beret* in the different levels. One for the 'must buy' list. **90%**

Renegade III
Hit Squad • £3.99

The final chapter in the *Renegade* series of beat-em-ups is an over-difficult jaunt through history. From pre-historic times, battling dinosaurs and neanderthals, to Egyptian times, fighting mummies and stuff, to a punch-up with medieval knights, to... well that's as far as we got. There's less fighting moves than in the first two games, and the whole thing is not bad. But not brilliant. **75%**

Bubble Bobble
Hit Squad • £3.99

Naff graphics, bordering on the *New Zealand Story*, slightly mar a reasonable but not brilliant game. It's very old (first appearing three years ago) and it shows. Blow bubbles at the baddies then burst them to bump the rotters off. They turn into food (?). Collect the food, along with various power-ups and bonus thingies, and battle your way through loads of platformy single screen levels. **71%**

BUDGET

There's a brand new look to the budget section this month, as we try to cram even more crucial information into it – especially as we can only find space for two pages this month! Grr... just wait till next time!

Anyway, the new format works like this. All new product gets a full-size review, all re-released ex-full-price stuff has already been reviewed in an earlier issue of *Amstrad Action*, so rather than take up valuable space with a normal review, we're putting them in the special re-release panels down the outside of the pages.

Got that? OK, time to check out what's latest and best on the budget scene. As ever, ADAM PETERS is your guide...



SEYMOUR GOES TO HOLLYWOOD
Code Masters • £3.99

MASTER GAME

"It's Dizzy," we cry. "No it's not," shout the Codies, "it's Seymour". "But it's egg-shaped and leaps around a four-colour Speccy port landscape, collecting objects and trying to solve puzzles," we shout back. "Yes, but it's got hands and it doesn't do somersaults," they reply, "oh poo. All right, it's not Dizzy, it's just someone that does the same sort of things as Dizzy. And, er, looks almost the same."

The basic plot is you've got to open a safe to get a script. Of course, as with all *Diz*... er, other games like this, you'll have been playing it for three months before you even find out where the safe is. There's lots of mysteries to solve, lots of puzzles to piece together, lots of mapping, lots of trying to remember where you dropped that bottle of aftershave you got from the man in the shoe-shop, and all that.

But this new character is so much cuter, this



• Seymour is just soooo sweet. Sweeter than a big mound of syrup covered in flowers and icky little pink and white ribbons. Aaaaw.

adventure so much more complex yet easier to get into, and the puzzles so clever that this puts all its predecessors well in the shade. If the follow-ups are anything like as good, pretty soon we won't even remember who *Dizzy* is.

Knocks the pants off those games about old, erm, thingy, you know, the egg.

92% VERDICT

INSPECTOR HECTI AT THE INTERCHANGE
Hi-Tec • £3.99

Let's take a trip back through time, to an age when Liz Taylor could fit through front doors, Neil Kinnock had some hair, and people boasted about owning 16K Spectrums. There was, at the time, on ZX81, Speccy, Vic 20 (ask your history teacher) et al, a plethora of games like *Inspector Hecti*. Maze games where you had to hare around trying to avoid the baddies whilst trying to move bits of the maze around.

That's exactly what you have to do in *Inspector Hecti*. Well if that's all there is to it, why not give it 3% and throw it in the bin then? Why not? Firstly because pre-historic games like *Maziacs* and *Mazogs* had an addictive quality and feeling of genuine fear about them sadly lacking in most of today's corporate product. Secondly, because Hi-Tec has done such a darned good job of the whole thing.

The game still has all the feel of its 1982 roots, but

BONANZA

Compilation

QUATTRO SKILLS

Code Masters • £3.99

There is a school of thought that suggests that any Codemasters game without an egg in it has to have the word 'simulator' in the title. *Quattro Skills*, the latest Codies four-pack, certainly seems to follow that line of thinking.

Pro Skateboard Simulator is a pretty nifty



• Yo dudes, crucial fab hey wow get down far out... skate frenzy 1991 beach front wipe out. Yo! (I beg your pardon? - ed)

little game of two halves. The urban bit sees you whizzing round some skatepark collecting flags in a very tight time limit. The rural bit sees you zooming along some cross country course, crashing into trees, fences, bridges and other stuff. There's seven levels.

International Rugby Simulator is one of the few Codies games that actually feels like a full-pricer. We're being bombarded with footage of this particular sport on the telly at the moment, and this is one way to get all the passing, kicking, tackling and scrumming action, without the accompanying bruises. An excellent game.

11-a-side Soccer Simulator originally featured on the *4 Soccer Sims* package. It's a pretty unresponsive and uninspiring little shindig, though it does feature offsides, which is quite rare on a computer footie game.

Pro Tennis, er, Simulator is a not-at-all-bad tennis game, and somewhat easier to get into than most games of this genre (you'll need practice). Graphics are typically budget-looking, and you'll swear the machine is cheating. But it isn't.

PRO SKATEBOARD SIMULATOR	76%
INTERNATIONAL RUGBY SIM	85%
11-A-SIDE SOCCER	56%
PRO TENNIS SIMULATOR	71%

Another pretty decent Codies comp

78% VERDICT

MOUNTAIN BIKE 500

Code Masters • £3.99



• Er yes, that's it.

An attempt to cash in on the hobby of the '90s, mountain biking. A hobby you can keep up with through reading *Mountain Biking UK* every month, £1.95 from all good newsagents (and a few crap ones).

But what about the game? Well, with small and fiddly sprites, limited gameplay and a tiny screen, let's just forget about it and talk about something else instead.

Did you see that potholing series on Channel 4...

Pretty dire little cycling game actually, missus.

43% VERDICT



RAVE

• What a corker! If you don't buy it you're completely mad...

with superb colourful graphics and a massive fifty levels to play through (with passwords every five). A game that will truly have your nerves on edge. And if you've never played any of its predecessors, probably the most original thing on the shelves. Buy! (Won't work on Plus machines, unfortunately.)

Arcade-blasting junkies will laugh in disagreement, but this is simply brilliant.

85% VERDICT

RE-RELEASES... RE-RELEASES...

Batman – The Movie

Hit Squad • £3.99



• Batman the Movie is one of those re-releases you'd have to be as stupid as Mr Incredibly-Stupid to miss. Go buy.

A truly fab film licence, and one of the best platform games around. Jump from level to level, using ladders or your bat-rope, throw your bat-boomerangs, kill the bat-baddies, do loads of bat-things. It's bat-brilliant, so batting well get down to your bat-software shop and bat-buy it now. Bat-great. **94%**

Moonwalker

Kixx • £3.99

Michael Jackson, half man, half mannequin, stars in this licence from the naff film of the same name. Level One is crap, but the other three are okay. You get twenty lives and your aim is to turn into a rabbit. Er, yes, well it is a bit of a daft game actually. But still a lorra lorra fun, as Auntie Cilla would say. **70%**

Indiana Jones and the Last Crusade

Kixx • £3.99

Another filmie, with naff Speccy graphics and four arcade adventures to battle through. The whole thing is remarkably similar to *Rick Dangerous* (the first). There's large sprites, good animation and some very oppressive time limits. Apart from that, it's yer standard cavey platform game. **79%**

Toobin'

Hit Squad • £3.99

An original arcade game, a limited colour Speccy port, controls that are initially hard to get to grips with, a course that can be finished on the first day, and a lot of fun to be had by all – that's *Toobin'*. You're sitting in an inner tube, floating down the Amazon (as you do), trying to avoid things that'll burst the tube. Quite jolly. **73%**

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FINAL FIGHT

US GOLD ■ £11.99 cass, £16.99 disk



This is the story of three men, one woman, a ruthless gang, and a city where the streets are paved with blood and people will chop you into little pieces and flush you down the toilet as soon as look at you. This is not the sort of place to accidentally spill someone's pint or wee over their shoes.





● Right Mr Two P, you old sadbo, it's the dustbin for you. Just 'cos you've got a silly cape, you ain't impressing no-one.

The good people of Metro City (and there are a few) are looking to the new mayor to sort it all out, and make the place as lovely to live in as Milton Keynes (sic). Fortunately, the mayor is called Haggar, he used to be a street fighter, and he attends council meetings bare-breasted, all rippling muscle and sinew, with a freshly-killed sheep under each arm (*are you sure about that bit? – ed*). This is surely the man to sort that gang out, once and for all.

And then there's poor Jessica. Poor, innocent Jessica, with a bow in her hair and a collection of Chesney Hawkes seven-inches. She's been kidnapped by that self same gang, the poor thing. But maybe those rotters have bitten off more than they can comfortable masticate this time.

Three hard and flavoursome young men (well, two hard and flavoursome young men and one old codge with a chain of office round his neck) are donning Reeboks and Joe Bloggs T-shirts, ready to do battle with that vicious mob and rescue young Jess.

You select which of these three dudes to play the part of. Each has their own special moves. Haggar is well hard, but the other two are a bit wimpy (particularly Guy). This gives the game extra appeal, 'cos when you've finished it as Haggar, you can then try again as one of his wimpier compadres.

The gang you're up against is called the Mad Gears, for some reason best known to themselves, and consists of virtually every weirdo you've ever tried to avoid at parties. Your energy appears at the top of the screen, theirs appears at the bottom. You often get two or more of the swine ganging up on you at once. Some of them can be bumped off with a single piledriver or throw. Others are a lot more stubborn.

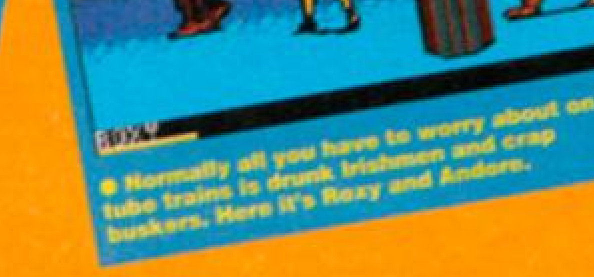


● Here's a construction site, Slash and Roxy. But where are we? Er, we're dead. Ho hum, sorry and all that. Nice day isn't it?

There are four levels, each consisting of three stages, and two bonus sections (after Levels Two and Three). Some of the hardest challenges on the cards include: Damno, the Level One guardian, who looks like the singer out of Motley Crue after some strange medication; Edi E, the bent copper at the end of Level Three, who shoots at you (the get); the double-tag wrestling team of Andore and Andore, a well nasty couple.



Dustbins and

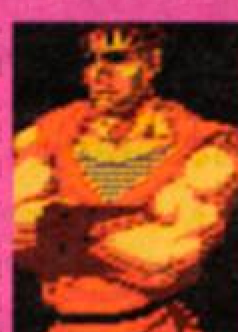


● Normally all you have to worry about on tube trains is drunk Irishmen and crap buskers. Here it's Roxy and Andore.

THE GOOD GUYS – Choose your hero



HAGGAR the mayor, also happens to be the father of kidnapped Jessica. He's one big auntie-lover of a hard dude, and his special move is a hair-grabbing, pile-driver thing that leaves its victims with 'no solids' signs stuck on their beds for months to come. Look out, you gang-people.



CODY doesn't actually know the kidnapped narly babe at all. He, er, just likes fighting, and frankly any excuse will do. "Phil Collins is number one, Cody." "Right, hang on, I'll just go and get my machete and knuckle-dusters." Cody is a ninja-kid, all waving fingers and "haaaiieee" noises.



GUY lists his hobbies as karate and knives. Jessica is his girlfriend, so he's understandably as narked as Haggar at what's happened. He's vowed that if any part of any gang member comes within a foot of Jess, he'll break it off and post it to Esther Rantzen as a Christmas present.



● Just 'cos we're in a wrestling ring, amidst a baying horde of your mates, don't think I'm not going to drop you on your head as usual.

THE BAD GUYS – Know your enemies



Andore looks a bit like Frankenstein's monster, but don't tell him that to his face. He's a very tough critter, and can take a lot of blows before finally popping his clogs. You'll face two of these beasts in the restaurant wrestling ring. And you'll be meeting them left, right and centre from Level Two onwards. Yikes.



Bill Bull is clearly a man not to say no to any cream cakes, chips, whole pheasants or slabs of lard passed his way. Let's be honest, he's fat. As fat as that kid in your class that everyone calls "hippo". He's a chef, apparently, but also one heck of a hard fighter. He doesn't appear too often, but when he does you'll know about it.



Bred is a bit of a wimp, and also, one feels, a bit too ordinary to be in the Mad Gears. Maybe he was on his way to an interview for some accountancy job and he wandered through the wrong door. Frankly, he'd be more suited to selling encyclopaedias than street-fighting. Still, he's cheaper than a punchbag, so who's complaining?



Damnd is bad. Bad with a capital B, a capital A, a capital D, and a capital G too. (That's how bad he is – he can't even spell.) He's the Level One guardian, and he's a bit of a headbanger. The sort of bloke who, when he's not killing people, drives a Harley Davidson, listens to Metalicca and eats lentil casserole. He's well tough.



Edi E is a bent copper. Unemployed since the West Midlands Serious Fraud Squad was closed down, he now wanders the streets of Metro City, shooting at good guys. You'll find him lurking at the end of Level Three, gunning down nuns and charity workers while he waits for you to show up. Let's teach him a lesson.



Hollywood wanders round in a bright orange lycra cat-suit. If that wasn't reason enough to nick him, he's also one of the (weedier) members of the Mad Gears. He always wanted to be a film star, but unfortunately he can't act. Well, he can't really fight much either. Punish him for crimes against fashion.



Roxy is the only chick in the gang. She's a bit wimpy, but smart enough to only show up alongside Andore. As a result, she lands a few punches while you're preoccupied. But what sort of hobby is urban violence for a woman anyway? She should get a proper haircut, marry a nice man and do lots of washing up instead.



Slash is the guitarist out of Guns 'n' Roses. Quite what he's doing wandering round levels Three and Four of *Final Fight* in a leather jacket hitting people is anyone's guess. Maybe he got bored of being a rock star and fancied pursuing something more, er, down to earth? Either way, he's one tough chocolate digestive.



Two P. is a bit of a wally really. He wanders round, a grown man, in broad daylight, wearing a super hero style cape and his pants over his trousers. What are we to make of this? Picked on at school, dropped on his head as a baby or just plain mad? Superman he certainly ain't though, the weedy little show-off.

FIRST DAY TARGET SCORE

Finish Level Three as Haggar



crates litter the place. Kick them to reveal energy-replacing food and weapons (pipe, knife etc), which are pretty useless until you get the hang of using them. The whole thing is set in alleyways, bars, subway trains – all over the place really. Your objective is to rescue Jessica and despatch the gang leader.

The graphics are something special – massive sprites and smooth scrolling that are definitely something to write home about (at length). Games like this aren't everybody's cup of cocoa, but if you like mindless beat-em-ups, you'll fall head over heels in love with this and want to have its babies.

Pacifists, old bores and ballet dancers



● Time to smash up this posh car for no good reason other than that we can't afford one. Practise class warfare for bonus points!



beware. *Final Fight* is quite simply the best Amstrad beat-em-up ever. "Oh yeah, come here and say that." "Right!" Biff. Pow. Bang. Wallop. Crash etc...

Adam P

SECOND OPINION

"Just look at the size of those sprites! A commendable technical achievement and a very good game too. Arcade licences aren't easy to convert to an 8-bit, but US Gold has done a great job here."

Rod Lawton

FINAL FIGHT VERDICT

GRAPHICS............. 94%
Truly giiiinormous sprites and hilarious animation. Brilliant!

SONICS................. 52%
Psssssch. Psssssch. Pupp. Pupp. Psssssch. Psssssch.

GRAB FACTOR....... 92%
It looks and plays brilliantly. Gets you hooked straight away.

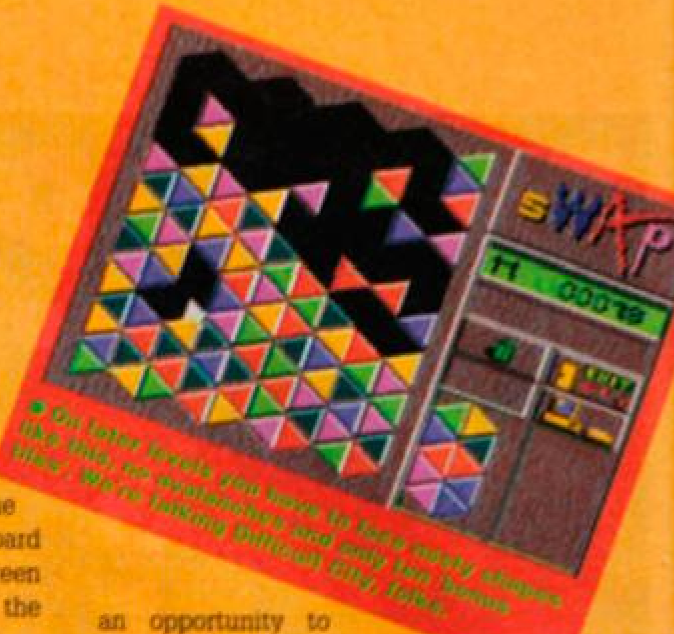
STAYING POWER... 95%
Once you've won as Haggar, try again as Guy or Cody.

RATING 93%

The king of the beat-em-ups. And if anyone wants to argue, I'll seem 'em in the car park afterwards.

SWAP

PALACE ■ £10.99 cass, £15.99 disk



● On later levels you have to face nasty shapes like this, no avalanches and only ten bonus tiles. We're talking Difficult City, folks.

Are you a budding Einstein or are you only good at lifting heavy things? Did you know that the human brain weighs 1.3kg and contains 10,000 million neurons (each of which is connected to an average of 60,000 others)? Can you write music or build bombs? Would you like to increase your IQ and beat the bozos?



● This is the first level. Until you get the hang of the game, it's probably all you'll see. All controls are carried out through clicking on icons.

Or, more to the point, have you got nothing better to do with your time than play some inane colour-swapping game? If your answer to most or all of these questions is "half-past three and bring that rubber chicken", then *Swap* could be the game for you.

The basic idea is to clear the screen of all the coloured squares (or whatever) on it. You do this by clicking on the join between squares to swap them over – any adjoining squares of the same colour disappear. Got that? There's also other stuff to help you, like the avalanche thing which makes all the squares left hanging in mid-air fall downwards. Oh yes, and some supplementary tiles by the side of the board which you can drag over and place on screen when things get tricky towards the end of the game.

There are 90 levels in total, but you don't usually play them all in order. It depends how smart you are. For example, your reviewer jumped straight from level 1 to level 32, and then to level 72, but that's only because he have a brain the size of a house and an intellect unmatched in modern civilisation. (And, er, he did do so badly on level 72 he went straight back to the start again.)

Advanced levels have extra features, such as different shaped tiles (triangles, hexagons), ultra-small tiles (bad news, man), no avalanches (serious bad news, man), time limits (aaagh!) and... the credit system.



● Oh blimey. Eleven seconds to wax several million blocks. Just click randomly on the screen a couple of times then do an avalanche. Easy.

The credit system will reduce you to a gibbering wreck, and it's got nothing to do with not being able to keep up the instalments on your video. Basically, each swap costs two credits, and each tile waxed gets you one credit. It's hard man, with a capital 'hard'.

Fortunately, the practice mode gives you an opportunity to practice with whatever options you choose (shapes, time limits etc). And you'll need to practice.



Swap is a funny old game. At first glance it looks like the dullest game in computing history. At second glance you realise it *is* the dullest game in computing history. But the MENSA-style instruction manual does such a good job of persuading you that the game is an outright challenge to every claim of intelligence that you've ever made, that you keep wanting to play it again and again. Even though it's completely boring. Weird.

Adam P

SECOND OPINION

"Boring? That's an understatement! Every time I tried to play it I got distracted looking out of the window or getting bits of fluff out of the keyboard..."

Rod Lawton

FIRST DAY TARGET SCORE

Stick with it!

SWAP VERDICT

GRAPHICS.............. 86%
Not a sprite in sight, but impossible to fault.

SONICS................. 71%
Really nice grinding and beeping noises.

GRAB FACTOR....... 26%
Controls are unresponsive and it's hard to understand at first.

STAYING POWER... 80%
You keep going back to it. Why?

RATING 72%

This is the most uninteresting game ever seen. And it's great!

SO YOU THINK YOU'RE SMART...?

How would you like to win a copy of *Swap*? You wouldn't? Well bog off then. For those of you who would, we have, er, ONE copy of this puzzling puzzle game to give away in this difficult-to-enter competition.

The *Swap* manual is packed full of MENSA-style IQ puzzles, so what better idea for the questions? (Don't answer that.)

So, put your verbal reasoning heads on – here come those questions:

1) What are the next two numbers in this sequence?

3 12 29 8 43 17 5 ... ...

2) What is the missing number in this table?

¬	¬	✓	✓	17
×	✓	➡	¬	23
➡	¬	×	✦	11
✦	➡	➡	✓	??

Simply note down your answers on the back of a postcard or wad of used fivers, and send it to: *I Think I'm Pretty Smart Compo, Amstrad Action, 29 Monmouth Street, Bath, Avon BA1 2DL*. First correct entry out of the matchbox after the 17th November 1991 closing date wins the game (on disk, 128K only, sorry). Okay?

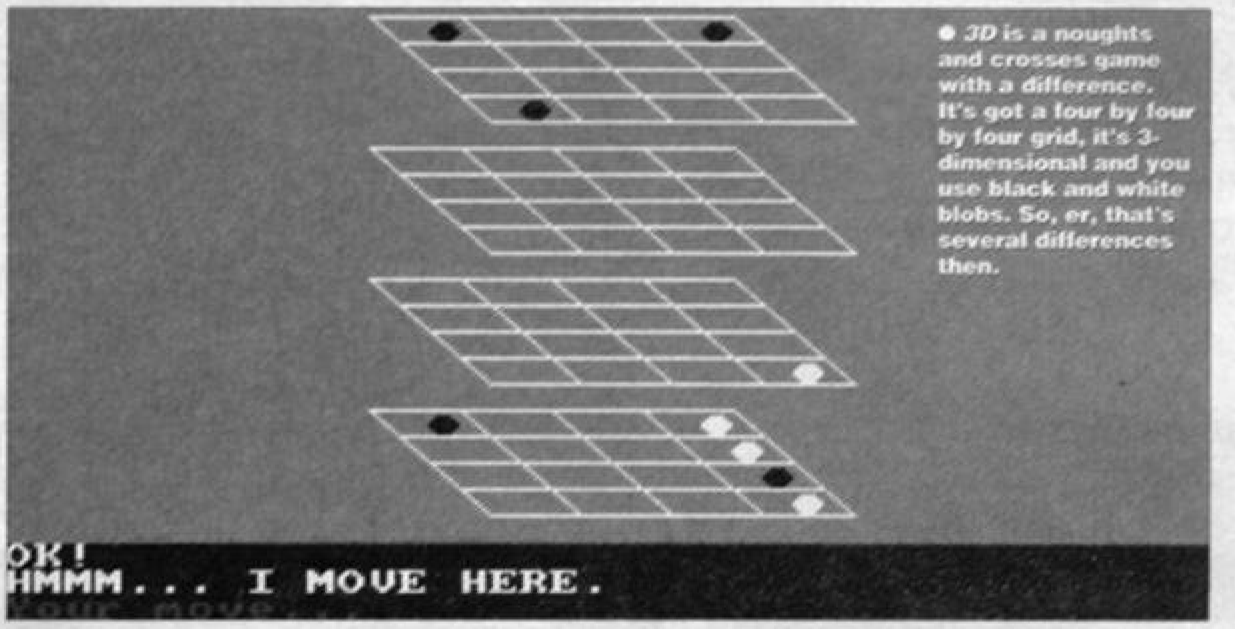
ADVERTISERS INDEX

Type-ins

Only two listings this month. Why's that, then? Because they're absolutely corkers, that's why!

The first is from coding veteran Mike Wong, and it's a rare thing indeed – a game with an 'intelligent' computer opponent. The second is an really well-presented CPC phone book, from Paolo Cuomo of Faversham

● Fancy yourself as a bit of a programmer? Send your programs to: *Type-ins, Amstrad Action, Future Publishing, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW*



● *3D* is a noughts and crosses game with a difference. It's got a four by four by four grid, it's 3-dimensional and you use black and white blobs. So, er, that's several differences then.

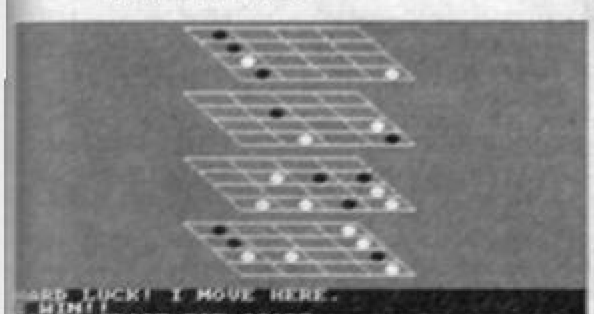
3D

Noughts and Crosses – crap game, eh? Once you've got the hang of it, every game ends in a draw! Three columns by three rows, flippin' easy, innit? Not any more, sunshine. The legendary Mike Wong of Sale presents a new version of a very old game (originally played by cavepeople using dinosaur bones).

He's added a bit of *Connect 4* and bunged the whole thing into 3D, the clever so and so. (Mike tells all in that box over there.) Use the cursor keys to move round the grid, and 'copy' to place your blob. Then hope the computer opponent isn't as smart as you are.

```
{KoBm} 10·GOSUB·1540:GOSUB·1520:PRINT#1,"GAME·N
       o.";n+1
{GpBn} 20·PRINT#1,"DO·YOU·WANT·TO·MOVE·FIRST·(Y
       /N)·?·";
{HuBq} 30·a$="":WHILE·a$="":a$=INKEY$:a$=UPPER$
       (a$):WEND
{EwBm} 40·IF·a$="N"·THEN·PRINT#1,a$:GOTO·140
{PsAq} 50·IF·a$<>"Y"·THEN·30
{PxAm} 60·PRINT#1,a$
{JpBo} 70·FOR·n=1·TO·64:IF·us(n)=0·THEN·n=65:GO
       TO·90
{MoAo} 80·NEXT:GOTO·810
{CmBq} 90·PEN#1,3:INK·3,6,26:PRINT#1,"Your·move
       ...";CHR$(13);:GOSUB·1170:PEN#1,1:INK·3
       ,6:GOSUB·1370:IF·gr<>0·THEN·130
{KjAr} 100·SOUND·1,3000,50,15
{OsBj} 110·PRINT#1,"GIVIN'·UP·EH?·COWARD!!!";
{OuBi} 120·POKE·&A001,PEEK(&A001)+1:GOTO·1050
{DvEl} 130·IF·us(gr)=0·THEN·us(gr)=1:p=1:GOSUB·
       1250:PRINT#1,"OK!";SPACE$(9):GOTO·140·E
       LSE·SOUND·1,3000,50,15:PRINT#1,"OCCUPIE
       D·SQUARE!":GOTO·70
{MrBs} 140·PEN#1,3:INK·3,6,26:PRINT#1,"Thinking
       ...";CHR$(13);
{MiAv} 150·GOSUB·1200:PEN#1,1:INK·3,6
{MwAs} 160·'·check·wins·for·you
{CsBn} 170·FOR·n=1·TO·76:IF·v(n)<>4·THEN·240
{NnAr} 180·PRINT#1,"DAMN!·····"
{AmAq} 190·PRINT#1,"YOU·";
{PiBi} 200·POKE·&A000,PEEK(&A000)+1:INK·3,26,13
{OsAw} 210·PRINT#1,"WIN!!";:FOR·q=1·TO·4
{FiAw} 220·gr=wn(n,q):p=3:GOSUB·1270
{EwAq} 230·NEXT:n=77:GOTO·1050
{CtAk} 240·NEXT
{ClAs} 250·'·check·wins·for·me
{BtBn} 260·FOR·n=1·TO·76:IF·v(n)<>15·THEN·310
{ElBu} 270·FOR·p=1·TO·4:IF·us(wn(n,p))=0·THEN·g
       r=wn(n,p):us(gr)=5
{IjAx} 280·NEXT:PRINT#1,"HARD·LUCK!·";
{LwCj} 290·p=5:GOSUB·1240:FOR·d=1·TO·150:CALL·&
       BD19:NEXT:PRINT#1,"I·";
{JxBp} 300·POKE·&A001,PEEK(&A001)+1:INK·3,0,13:
       GOTO·210
{EmAl} 310·NEXT
{NkAq} 320·'·block·your·wins
{HiBl} 330·FOR·n=1·TO·76:IF·v(n)<>3·THEN·380
{BsBl} 340·FOR·p=1·TO·4:IF·us(wn(n,p))<>0·THEN·
       370
{ClBn} 350·gr=wn(n,p):us(gr)=5:PRINT#1,"NICE·TR
       Y,·BUT·";
{LwAt} 360·n=77:GOSUB·1230:GOTO·70
{AuAl} 370·NEXT·p
{LwAk} 380·NEXT·n
{BjAs} 390·'·sort·out·my·move
{BjBr} 400·FOR·n=1·TO·76:IF·v(n)<10·OR·v(n)>=11
       ·THEN·450
{EmAu} 410·IF·v(n)>10·THEN·960
{FwBm} 420·FOR·p=1·TO·4:IF·us(wn(n,p))<>0·THEN·
       440
{HxAq} 430·us(wn(n,p))=0.125
{CnAm} 440·NEXT·p
{AqAm} 450·NEXT·n
{KpAn} 460·GOSUB·1200
{EnAq} 470·FOR·n=1·TO·76
{CwCo} 480·IF·v(n)=0.5·OR·v(n)=5.375·THEN·p=0.1
       25:q=n:n=77:GOSUB·900:GOTO·860
{MwAk} 490·NEXT
{JvAm} 500·GOSUB·1170
{AiAv} 510·GOSUB·1200:FOR·n=1·TO·76
{EoBk} 520·IF·v(n)<2·OR·v(n)>=3·THEN·580
{AlAw} 530·IF·v(n)>2·THEN·960
{EwAq} 540·FOR·p=1·TO·4
{PrAv} 550·IF·us(wn(n,p))<>0·THEN·570
{EnAr} 560·us(wn(n,p))=0.125
{BuAl} 570·NEXT·p
{DiAl} 580·NEXT·n
{AiAn} 590·GOSUB·1200
{KmAp} 600·FOR·n=1·TO·76
{BtCp} 610·IF·v(n)=0.5·OR·v(n)=1.375·THEN·p=0.1
       25:q=n:n=77:GOSUB·900:GOTO·860
{PjAk} 620·NEXT
{NiBl} 630·FOR·n=1·TO·18:p=0:FOR·q=4*n-3·TO·4*n
{GlAx} 640·FOR·r=1·TO·4:p=p+wn(q,r):NEXT·r,q
{FiAt} 650·IF·p<4·THEN·690
{DtAs} 660·IF·p<5·THEN·840
{GxAt} 670·IF·p<9·THEN·690
{FnAt} 680·IF·p<10·THEN·840
{HiAk} 690·NEXT·n
{PxAm} 700·GOSUB·1170
{MjBo} 710·FOR·n=1·TO·16:IF·us(cc(n))<>0·THEN·7
       40
{PsBj} 720·gr=cc(n):us(gr)=5:PRINT#1,"HMMM...·"
       ;
{OkAs} 730·n=17:GOSUB·1230:GOTO·70
{PmAj} 740·NEXT
{FxAs} 750·'·any·free·space·?
{AlBm} 760·FOR·n=1·TO·64:IF·us(n)<>0·THEN·790
{KpAx} 770·gr=n:us(gr)=5:PRINT#1,"FOUND·ONE!·";
{CuAs} 780·n=65:GOSUB·1230:GOTO·70
{IuAk} 790·NEXT
{DvAo} 800·'·none·left!
{JrBi} 810·PRINT#1,"LOOKS·LIKE·IT'S·A·DRAW..."
{FuBj} 820·POKE·&A002,PEEK(&A002)+1:GOTO·1050
{KmAm} 830·'·chances
{MwAs} 840·p=0.125:GOSUB·870
{LlAp} 850·p=0:GOSUB·870
{KsBo} 860·PRINT#1,"I·CAN'T·WORK·THIS·OUT!·";:G
```

```
     OTO·1020
(NtAp) 870·FOR·q=4*n-3·TO·4*n
(ErAn) 880·GOSUB·900
(LlAo) 890·NEXT·q:RETURN
(FtBl) 900·IF·q-INT(q/4)*4)1·THEN·s=2·ELSE·s=1
(GsAv) 910·FOR·r=s·TO·5-s·STEP·5-2*s
(MrAw) 920·IF·us(wn(q,r))=p·THEN·940
(FmAq) 930·NEXT·r:RETURN
(DsBn) 940·gr=wn(q,r):us(gr)=5:n=77:GOSUB·1230:
       GOTO·70
(CvAo) 950·'·fill·chances
(FoAp) 960·FOR·p=1·TO·4
(MsBj) 970·IF·us(wn(n,p))()0.125·THEN·1010
(NqAr) 980·gr=wn(n,p):us(gr)=5
(EoCm) 990·IF·v(n)(5·THEN·PRINT#1,"SNEAKY!·";·E
       LSE·PRINT#1,"OK·PAL,·WATCH·OUT,·";
(NmAs) 1000·n=77:GOSUB·1230:GOTO·70
(OxAk) 1010·NEXT
(NmAv) 1020·PRINT#1,"OK,·I·QUIT!!!";
(AuAv) 1030·POKE·&A000,PEEK(&A000)+1
(OwAo) 1040·'·game·over
(IoAw) 1050·WINDOW·SWAP·0,1:PEN·1:PRINT
(ErBl) 1060·PRINT"PRESS·SPACE·FOR·SCORE":GOSUB·
       1110
(BtAv) 1070·PRINT"STATE·OF·PLAY·IS..."
(BpCq) 1080·PRINT"YOU:";PEEK(&A000);"··ME:";PEE
       K(&A001);:PRINT"··DRAWN:";PEEK(&A002)
(DiBl) 1090·GOSUB·1100:WINDOW·SWAP·0,1:CLS#1:RU
       N
(JmBo) 1100·PRINT"SPACE·TO·PLAY·AGAIN·OR·R·TO·R
       ESET·SCORE"
(EoBk) 1110·a$="":WHILE·a$="":a$=INKEY$:WEND
(ArAu) 1120·IF·a$="·"·THEN·1150
(NqBl) 1130·IF·UPPER$(a$)()"R"·THEN·1110
(FjBn) 1140·POKE·&A000,0:POKE·&A001,0:POKE·&A00
       2,0
(FsAn) 1150·RETURN
(GkAp) 1160·'·clear·chances
(IvBp) 1170·FOR·n=1·TO·64:IF·us(n)=0.125·THEN·u
       s(n)=0
(CsAn) 1180·NEXT:RETURN
(BiAp) 1190·'·get·combs·values
(KpBl) 1200·ERASE·v:DIM·v(76):FOR·n=1·TO·76
(PiBr) 1210·v(n)=us(wn(n,1))+us(wn(n,2))+us(wn(
       n,3))+us(wn(n,4))
```



• Damn! Blast! Poo! Just as well we weren't playing for money, eh?

```
(AwAn) 1220·NEXT:RETURN
(CvAl) 1230·p=2
(JkAv) 1240·PRINT#1,"I·MOVE·HERE."
(IvBp) 1250·GOSUB·1270:PEN#1,1:SOUND·1,30,0,15,
       1:RETURN
(FuAn) 1260·'·display
(KpAu) 1270·lvl=INT((gr-1)/16)+1
(FrBj) 1280·row=INT(((gr-16*(lvl-1))-1)/4)+1
(CqAx) 1290·col=gr-(lvl-1)*16-(row-1)*4
(JiAs) 1300·x=(col-1)*3+5+row
(GpAs) 1310·y=row+2+(lvl-1)*5
(PuBv) 1320·LOCATE·x+9,y:IF·p=4·THEN·PEN·1:PRIN
       T·CHR$(240):RETURN
(NxBi) 1330·IF·p=5·THEN·INK·3,0,6:p=3
(JsBx) 1340·PEN·p:PRINT·CHR$(22);CHR$(1);CHR$(2
       31);CHR$(22);CHR$(0)
(DkAo) 1350·RETURN
(NtAn) 1360·'choose·posn
(OiAs) 1370·IF·gr=0·THEN·gr=1
(HjAn) 1380·ogr=gr
(EjBq) 1390·IF·INKEY(0)()-
       1·AND·gr)16·THEN·gr=gr-16
(LiBr) 1400·IF·INKEY(2)()-
       1·AND·gr(49·THEN·gr=gr+16
(KsBq) 1410·IF·INKEY(1)()-
       1·AND·gr(64·THEN·gr=gr+1
(HqBp) 1420·IF·INKEY(8)()-
       1·AND·gr)1·THEN·gr=gr-1
(HoAw) 1430·p=3:GOSUB·1270:tgr=gr:gr=ogr
(DkBk) 1440·IF·us(gr)=1·THEN·p=1:GOTO·1470
(CwBk) 1450·IF·us(gr)=0·THEN·p=0:GOTO·1470
(EqAl) 1460·p=2
(LlAq) 1470·GOSUB·1270:gr=tgr
(OuBl) 1480·IF·INKEY(9)()-1·THEN·RETURN
(MjBm) 1490·IF·INKEY(67)()-1·THEN·gr=0:RETURN
(FqAm) 1500·GOTO·1380
(HnAl) 1510·'score
(DrBn) 1520·n=PEEK(&A000)+PEEK(&A001)+PEEK(&A00
       2):RETURN
(DiAl) 1530·'init
(BnAv) 1540·SYMBOL·240,0,0,0,0,0,0,0,255
(HqBn) 1550·ENV·1,1,0,2,1,-2,1,5,-1,2,7,-1,8
(DtAx) 1560·DEFINT·c,e,l,n,q,r,s,t,w,x,y
(ExBj) 1570·DIM·wn(76,4),us(64),v(76),cc(16)
(HvAr) 1580·'·combs·generator
(HuBk) 1590·n=1:FOR·t=1·TO·16:READ·p,q,r,s
(FtCr) 1600·wn(n,1)=q:wn(n,2)=q+r:wn(n,3)=q+r*2
       :wn(n,4)=q+r*3:q=q+s:n=n+1:IF·n()p·THEN
       ·1600
(IpAl) 1610·NEXT
(DiAw) 1620·DATA·17,1,1,4,33,1,16,1
(PmAu) 1630·DATA·37,1,4,1,41,17,4,1
(NxAx) 1640·DATA·45,33,4,1,49,49,4,1
(LqAv) 1650·DATA·53,1,5,16,57,13,-3,16
(AkBi) 1660·DATA·61,1,20,1,65,49,-12,1
(OrBi) 1670·DATA·69,1,17,4,73,49,-15,4
(GxAu) 1680·DATA·74,1,21,4,75,16,11,4
(ClAw) 1690·DATA·76,4,19,4,77,13,13,4
(GtBn) 1700·FOR·n=1·TO·16:READ·p:cc(n)=p:NEXT
(EoAv) 1710·DATA·1,49,52,4,13,61,64,16
(LuBj) 1720·DATA·22,39,23,38,26,42,27,43
(OuDt) 1730·FOR·n=&C000·TO·&FFFF·STEP·&40:tot=t
       ot+PEEK(n):NEXT:IF·tot=4979·THEN·FOR·gr
       =1·TO·64:p=4:GOSUB·1270:NEXT:gr=0:RETUR
       N
(GtDq) 1740·MODE·1:BORDER·13:SPEED·INK·10,10:IN
       K·0,13:INK·1,26:INK·2,0:INK·3,6:WIN-
       DOW#1,1,40,23,25:PAPER#1,3:CLS#1
(GlCp) 1750·PEN·1:PAPER·2:PRINT"3D·NOUGHTS·AND·
       CROSSES·:·MIKE·WONG·";CHR$(164);"1991":
       PAPER·0
(FiAx) 1760·FOR·y=3·TO·18·STEP·5:FOR·n=0·TO·4
(IkBk) 1770·PLOT·(13+n-1)*16,400-(16*(y+n-1)),1
(FmAq) 1780·DRAWR·16*12,0
(GwBk) 1790·PLOT·(13-1)*16+(48*n),400-(16*(y-
       1))
(DmAv) 1800·DRAWR·16*4,-16*4:NEXT·n,y
(JiAm) 1810·PEN#1,2
(JwBx) 1820·PRINT#1,"(C)·1991·Artificial·Intell
       igence·Inc.":PEN#1,1
(DmAv) 1800·DRAWR·16*4,-16*4:NEXT·n,y
(JiAm) 1810·PEN#1,2
(JwBx) 1820·PRINT#1,"(C)·1991·Artificial·Intell
       igence·Inc.":PEN#1,1
(OrAw) 1830·PRINT#1,"Thanx·:·R·&·J·Playtesters"
(PlBt) 1840·PRINT#1,"Keys··:·CURSOR·KEYS·&·COPY
       ·(Q·to·QUIT)";
(JwAx) 1850·CALL·&BB18:PAPER#1,2:CLS#1
(EkBj) 1860·MEMORY·&9FFF:GOSUB·1140:RETURN
```

Doctor Mike's Type-ins Surgery



Young doctors. When they're not talking in Australian accents and getting involved in triangular love affairs amongst themselves, they're writing programs for *Type-ins*. Or, at least, Sale's longtime *Cheat Mode* hero Michael Wong is...

"This program was written when artificial intelligence was in vogue. 3D noughts and crosses is based on the popular game, but I decided there would be four 4 by 4 grids to play with, giving 76 winning moves!

"I started by programming the display first, and worked out the details later. Initially this brought problems; first attempts involved entering moves by the number of the square by means of a cumbersome key next to the board display. So I opted for a moving counter display, in lines 1370-1500. Complex formulae in lines 1270-1310 are used to find the exact position of any particular square on screen. As you can guess, this took ages.

"The actual program workings took even longer! Lines 260-310 basically allocate values to squares depending on whether they are empty (0), filled with your counter (1) or the computer's (5). It then allocates values for each of the winning moves, based on the value held in the squares that make up the move. Thus if you had occupied 1,2 and 4 for winning move 1,2,3,4 and 3 was empty, the value would be 3 (1+1+0+1), and the computer would block any 3's it found. By the same token, if it found any 15's (ie three 5's) it would go for them to win.

"But early on, most winning moves are only partially occupied. Thus in lines 400-700 and 840-1010 the program then allocates probabilities of moving to any particular square, based on the counters already there.

"The problem at this stage was entering all 76 moves, found by tedious experimentation, into an array. Each winning move consists of 4 numbers, thus it would involve entering over 300 pieces of data. This is where the combination generator in lines 1580-1690 comes in; all moves are geometrically related to each other, eg. vertical moves down means adding 16 to the previous number (1,17,33,49 ; 2,18,34,50 ...). Thus I was able to break down whole groups of winning moves to simple equations, reducing the number of data to 64.

"After all that, I had plenty of hassle with 'memory full' errors due to the amount of arrays and number-crunching. I solved this by making the program RUN from new every time. However this brought its own problem of clearing basic variables including the score and having to redraw the display every time. Hence the score is stored in memory locations above himem and, by testing what is on screen already (line 1730), all that would be needed on screen would be clearing the board.

"Final tweaks involved adding sound and enhancing the display. Perhaps, because of the pseudo-artificial intelligence, this is one of the most satisfying programs I have written."

PHONE

Have problems remembering phone numbers? Keep losing those biro-covered bits of cigarette box you come home from the pub with? Constantly waking up to find those digits, etched in lipstick on the back of your hand the night before, have rubbed off? I know the problem (*you lying get – ed*). What we really need is some sort of computer program to store phone numbers, huh?

And wouldn't you know it, Faversham rascal Paolo Cuomo has darned well gone and written one. God bless you Paolo, my son. Actually, we get quite a few address and/or phone number storing progs here at Typos, but none as stylishly done as this one. Social life City, here we come!

```
<LxAt> 10·REM··WRITTEN·BY·PAOLO·CUOMO
<CuBo> 20·REM···WRITTEN·ON·6128·BUT·!!SHOULD!!·
       WORK·ON·ALL·CPC's
<IuBl> 30·REM····N.B.··ALL·REM·STATEMENTS·MUST·
       BY·TYPED·IN!
<NiBk> 40·DIM·name$(200):DIM·number$(200)
<JuAs> 50·ON·ERROR·GOTO·1250
<OxBk> 60·MODE·2:BORDER·0:INK·0,0:INK·1,26·
<KkAm> 70·borderc=0
<HmAm> 80·penc=26
<LnAp> 90·background=0
<DvAl> 100·pres:1
<KsAp> 110·length=1
<GjAt> 120·WINDOW·#0,1,80,3,21
<PtAs> 130·WINDOW·#1,1,80,1,3
<EpBs> 140·PRINT·#1,"··············NUMBER·FILER
       ·(v1.1)·for·CPC·464,664·&·6128"
<KpBp> 150·PRINT·#1,"··························
       ";CHR$(164);"1991·Paolo·Cuomo"
<PsAu> 160·WINDOW·#2,1,80,22,25
<JiAp> 170·PRINT·CHR$(7)
<JvAm> 180·CLS#2
<LrAk> 190·CLS
<NjCl> 200·PRINT·#2,"1....Input·data···········
       ··2....List·data·············3....Chang
       e·colours"
<AoCi> 210·PRINT·#2,"4....Save·data············
       ··5....Load·data·············6....Print
       ·data"
<BkBt> 220·PRINT·#2,"7....Clear·memory·········
       ··8....Search·data···········9....Quit"
<FpAn> 230·i$=INKEY$
<GuAv> 240·IF·i$="1"·THEN·GOTO·340
<OtAv> 250·IF·i$="2"·THEN·GOTO·440
<EiAx> 260·IF·i$="3"·THEN·GOTO·550
<FuAw> 270·IF·i$="4"·THEN·GOTO·740
<MoAv> 280·IF·i$="5"·THEN·GOTO·850
<MnAv> 290·IF·i$="6"·THEN·GOTO·980
<JxAv> 300·IF·i$="7"·THEN·GOTO·1060
<GxBi> 310·IF·i$="8"·THEN·GOTO·1130
<IqAw> 320·IF·i$="9"·THEN·GOTO·1210
<OqAl> 330·GOTO·230
<LuAs> 340·REM·***INPUT·DATA***
<AmBs> 350·CLS·#2:PRINT·#2,"<RETURN>·to·re-
       turn·to·menu"
<LjAl> 360·CLS
<AsAs> 370·FOR·a=length··TO·200
<CvAt> 380·INPUT"Name...";name$(a)
<FuBk> 390·IF·name$(a)=""·THEN·GOTO·180
<OkAt> 400·INPUT"Number.";number$(a)
<InAr> 410·length=length+1
<OpAk> 420·PRINT
<PiAj> 430·NEXT
<PuAs> 440·REM·***LIST·DATA***
<CxAp> 450·CLS:CLS#2
<GmBk> 460·PRINT#2,"<ESC>·to·pause·listing"
<ArAr> 470·ON·BREAK·GOSUB·540
<GoAo> 480·FOR·a=1·TO·200
<LlCl> 490·IF·a=length+1·THEN·PRINT"Press·any·k
       ey...":CALL·&BB18:GOTO·180····
<MxAx> 500·PRINT·name$(a);TAB·(25)number$(a)
<GvCk> 510·IF·a=length+1·THEN·PRINT"Press·any·k
       ey...":CALL·&BB18:GOTO·180
<EvAn> 520·i$=INKEY$
<FnAl> 530·NEXT·a
<HpAu> 540·CALL·&BB18:RETURN
<GlAt> 550·REM·***COLOUR·CHANGE***
<IsAm> 560·CLS·#2
<LjDt> 570·PRINT·#2,"Press·'p'·to·change·pen·co
       lour·and··'s'·to·change·screen·-
```

The Giant AA Type-In

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Archiver	AA65	Diskedit	AA26
Automatic Menu	AA34	Filecopy	AA21
Catalogue to Variables	AA23	(addition)	AA22
Disc Doctor	AA69	Quick Format	AA73
Disc Manager	AA72	Rodos Catalogue	AA34
Disc Nurse	AA54	Streamer	AA28
Discutil	AA28	(correction)	AA30
Disk Compactor	AA32	Super Cat	AA50
Disk Map	AA27	Ultra Form (format)	AA70
Disk Menu (mk2)	AA18	Unerase	AA9
Disk Menu	AA6	Unerase Mk2	AA41
Disk Sector Editor	AA36		

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Controlling Patterns	AA21	Rotating Polygons	AA40
Conveyor Belt	AA8	Rotating Sphere	AA8
Dionsylan Spiral	AA3	Rotating Triangle	AA17
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Dotty	AA19	Serpent	AA21
Electronic Rainbow	AA17	Snowstorm	AA16
Fireworks	AA50	Space	AA16
(correction)	AA51	Space Tunnel	AA18
Flag	AA61	Spinning Diamond	AA24
Fracland	AA50	Spiralu (+ Spirald)	AA15
Fuzzy	AA21	Stained Glass*	AA15
Graphic Patterns	AA6	Steam Engine	AA43
Graphic*	AA65	Swirl	AA8
Hypno-Strobe	AA45	The 3D World	AA17
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Encrypter	AA33	Sprite Driver	AA55
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Amstrad Drumkit	AA6	Sound Digitizer (tape)	AA15
(Drumkit update)	AA9	(Sound Sampler)	AA15
Chords and Scales	AA64	Sound to Light	AA18
Electric Organ	AA54	Synth	AA18
Guitar Trainer	AA42	Tunegen* (composer)	AA57
Music Composer	AA5	(correction)	AA58

PRINTER UTILITIES (26)

#/£ Printing Cure	AA23	Double-column Print	AA30
Big Dump (oo-er)	AA66	E-Type (9-pin NLQ)	AA70
Case Converter	AA26	Inlay Cards	AA69
Cat#8 (464)	AA11	Manuscript (music)	AA12
Cat#8 (6128)	AA10	Megadump	AA22
Cat#8 Mk2	AA43	Near Letter Quality	AA42
Character Print	AA23	Poster Maker	AA14
Colour Printing	AA71	Printer Buffer	AA26
Colour Screen Dump	AA68	Printer Dump	AA35
Colourdump (Star LC10)	AA47	Printer Typefaces	AA19
Dirprint	AA50	Shadydump (DMP2000)	AA16
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Data Maker	AA56	Search-and-Replace	AA18
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Codebreaker	AA7	Magazine Editor	AA34
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Hanoi's Tower (+ tutor.)	AA55	Solitaire	AA39
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Life	AA44		

```
     colour":PRINT·#2,"Press·'r'·to·return·t
     o·main·menu"
{FjAn} 580·i$=INKEY$
{AmBl} 590·IF·UPPER$(i$)="R"·THEN·GOTO·100
{CuBk} 600·IF·UPPER$(i$)="S"·THEN·GOTO·630
{MkBk} 610·IF·UPPER$(i$)="P"·THEN·GOTO·700
{CpAn} 620·GOTO·580
{CpAu} 630·LET·borderc=borderc+1
{AoAt} 640·background=background+1···
{DsBk} 650·IF·borderc)26·THEN·LET·borderc=0
{LxBm} 660·IF·background)26·THEN·background=0
{MuAp} 670·BORDER·borderc
{PrAq} 680·INK·0,background···
{NqAl} 690·GOTO·580
{KqAo} 700·penc=penc+1·
{GnAv} 710·IF·penc)26·THEN·penc=0
{DuAn} 720·INK·1,penc
{HkAm} 730·GOTO·580
{IiAr} 740·REM·***SAVE·DATA***
{DuBs} 750·CAT:'This·line·does·not·have·to·be·t
     yped·in·for·tape·users!
{KuBu} 760·PRINT·CHR$(7):CLS#2:INPUT#2,"Enter·f
     ilename";filesave$
{HpBk} 770·IF·filesave$=""·THEN·GOTO·100
{FoAr} 780·OPENOUT·filesave$
{ErAo} 790·FOR·a:=1·TO·200
{BoBl} 800·WRITE·#9,name$(a),number$(a)
{CwAl} 810·NEXT
{DkAo} 820·CLOSEOUT
{EuAw} 830·PRINT·CHR$(7):PRINT#2,"Saved."
{FnAu} 840·CALL·&BB18:GOTO·100
{DjAs} 850·REM·***LOAD·DATA***
{NsAl} 860·CLS#2
{FoBs} 870·CAT:'This·line·does·not·have·to·be·t
     yped·in·for·tape·users!·····
{AiBs} 880·PRINT·CHR$(7):INPUT·#2,"Enter·filena
     me";fileload$
{IkBj} 890·IF·fileload$=""·THEN·GOTO·100
{AtAq} 900·OPENIN·fileload$
{EvAn} 910·FOR·a:=1·TO·200
{CqBk} 920·INPUT·#9,name$(a),number$(a)
{EtBq} 930·IF·name$(a)=""·THEN·length=a:GOTO·10
     0
{NwAk} 940·NEXT
{DsAn} 950·CLOSEIN
{HxAx} 960·PRINT·CHR$(7):PRINT"Loaded."
{HwAm} 970·GOTO·100
{CvAq} 980·REM·Print·data
{DmAn} 990·CLS·#2
{CkAr} 1000·PRINT·#2,"Printing."
{KrAv} 1010·PRINT#8,"Names········Numbers"
{BpAs} 1020·FOR·a:=1·TO·length
{OkBj} 1030·PRINT·#8,name$(a),number$(a)
{GkAl} 1040·NEXT
{HrBx} 1050·CLS#2:PRINT·CHR$(7):PRINT#2,"Finish
     ed.":CALL·&BB18:GOTO·100
{GjAo} 1060·REM·Erase·data
{BqBx} 1070·CLS·#2:INPUT·#2,"Do·you·wish·to·era
     se·data·from·memory";ques$
{PpAx} 1080·IF·ques$=""·THEN·GOTO·100
{OmBn} 1090·IF·UPPER$(ques$)="N"·THEN·GOTO·100
{EjBo} 1100·IF·UPPER$(ques$)="Y"·THEN·GOTO·1110
{LxBm} 1110·length=1:ERASE·name$:ERASE·number$
{EqAn} 1120·GOTO·100
{OwAt} 1130·REM·***SEARCH·DATA***·
{JrBt} 1140·CLS#2:INPUT·"Enter·name·to·search·f
     or";search$
{DvAs} 1150·FOR·a:=1·TO·length+1
{MwBo} 1160·IF·INSTR(name$(a),search$)=0·THEN·1
     190
{IkBj} 1170·PRINT·name$(a);TAB(25)number$(a)
{DmAu} 1180·CALL·&BB18:GOTO·100
{OtAk} 1190·NEXT
{BmCj} 1200·PRINT"Name·not·found!·Press·any·key
     ...":CALL·&BB18:GOTO·100
{AxAr} 1210·REM·***QUIT***
{IiAm} 1220·CLS·#2
{DlBj} 1230·INPUT#2,"Do·you·wish·to·QUIT";quit$
{JuBt} 1240·IF·quit$="Y"·OR·quit$="y"·THEN·LIST
     ·ELSE·GOTO·100
{LqBl} 1250·PRINT·"ERROR·IN·LINE";ERL:LIST
```

AA

Clear my name!

We've had a letter from S. Dolphin up in Scotland about 'his' *Bomber* type-in, published in *AA70*. He didn't know it was on the disk he sent us! There were other progs on there which he *had* written and which were the ones we were meant to see.

As for the others since then who have jumped on the blagging bandwagon, though... look out!

Index

We had so many requests for an index of all the *Type-ins* ever published in *Amstrad Action* that we just had to do you one...

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Big Dump (oo-er)	AA66	E-Type (9-pin NLQ)	AA70
Case Converter	AA26	Inlay Cards	AA69
Cat#8 (464)	AA11	Manuscript (music)	AA12
Cat#8 (6128)	AA10	Megadump	AA22
Cat#8 Mk2	AA43	Near Letter Quality	AA42
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HELPLINE

Feeling helpful? Need help? Can't get past the rhinocerous in *Revenge of the Turnips*? Trying to get hold of a firmware mannual or a TV modulator? *Helpline* is here for you.

Just send your name, address and phone number, and details of what you're after to: *Helpline*, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2AP. Please write on a postcard or the back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

Due to shortage of space, we prefer to only print a first name and phone number. If you want help contact the appropriate Helpliner – not us. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal, keep it cool, keep it on the straight and narrow. Yo!

Help offered on all *Dizzy* games, *Dan Dare 1*, *Top Cat*, *Yogi Bear - The Greed Monster* and *Little Puff*.
Amanda, 0268 764135

Wanted: help on *Dizzy*. Am I supposed to collect the falling ice in the potion bottle to make dry ice? If so, how?
Angela, 0344 428053 (*give Amanda a ring, Ange!*)

I have *Italia '90*, *Nemesis the Warlock*, *Mega-Apocalypse*, *Micropose Soccer*, *Total Eclipse*, *Renegade* and budget games (four for a game), all on tape. Will swap for disk games. Would like *Kick Off 2*.
Michael, 0858 89363 5pm-7pm

Can anyone tell me the keypress cheat for *Grand Prix Simulator* (AA58)?
Andrew, 0727 875656 5.30pm-9pm

Wanted desperately by OAP, to beg, borrow or buy: *Scrabble Deluxe* for the 6128 on disc.
Ron, 0646 684627

SEX! Now I've got your attention!!! Wanted: *Bloodwych* (disc), *Manchester Utd Europe* (tape/disc), *Shadow Warriors* (tape/disc). Will swap for: *Bloodwych* (tape), *Crazy Cars 2* (tape), *Power Drift* (tape), *Black Tiger* (tape), *Double Dragon 2* (tape). ONE for ONE.
David, 0695 32291 outside school hours

Hi! Has anybody got *Hong Kong Phoey*, *Renegade*, *Dizzy 1 & 2*, they would swap for *Monopoly*, *Cluedo*, *Rambo* and *Roland in the Caves*?
Ty, 0624 814332

I will swap someone *Golden Axe* and *Magic Land Dizzy* for *Rick Dangerous 2*.
Derek, 010 353 61 415733 (Ireland)

Wanted: *Lotus Esprit*, *Prince of Persia*, *Super Cars*, *Golden Axe*. Will swap for *Castle Master*, *Laser Squad*, *Turrican*, *Chase HQ*, *Rick Dangerous 1* or *2*.
Brian, 0621 854030

Help needed in *Bloodwych*. I can't get out of the keep.
Dave, 0827 54964

Wanted: *Rock and Wrestle* and/or any other wrestling games for CPC 464 cassette, in exchange for *Night Raider*, *Ninja Spirit*, *Vigilante*, *After Burner*, *4x4 Off-Road Racer*.
Steve, 0752 881592

Wanted: Any disk games. Will swap for any of eleven original tape games or *Robocop* (disk). Games include *Ghouls 'n' Ghosts*, *Gauntlet*, *Fantasy World Dizzy*. Also 6128 tape-connection lead.
0545-570004 after 4pm

Wanted: *Rick Dangerous 2*, *Exterminator*, *Super Cars*, *Prince of Persia*, *Bloodwych* or *Skate Wars* (tape originals). To swap with: (all tape originals) *Turrican*, *X-Out*, *Rainbow Islands*, *Escape from the Planet of the Robot Monsters*, *Stunt Car Racer*, *Shadow of the Beast* or *Ghouls 'n' Ghosts*. Also, has anyone out there got the *Great Gians Sisters* (by Rainbow Arts). Will swap for any of the above and budget game.
Jonathan, 0302 851592

Help given on all *Dizzy* games except *Kwik Snax*. Has anybody got an art program on tape and a mouse or a Multiface 2 they would like to sell for a sensible price? Also I will give help on how to complete BOTH *Barbarians*.
Dave, 0472 251330

Wanted: *Stunt Car Racer* for the 6128 (disc). Will swap for *Operation Wolf* and *Robocop* on disc. Also wanted: North and South (disc) for Purple Saturn Day and *Dragon Ninja* (disc).
Ben, 081-660 4924 5pm-9pm

Wanted: Loan of Operator's Manual for Epson MS-80 terminal printer. Expenses paid.
Peter, 051-677 3670

Wanted: *Football Manager 2*, *Football Director 2* or *Football Manager World Cup* (tape or disc). Will swap for *Forgotten Worlds*, *Dragon's Lair 1 & 2*, *3D Boxing*, *Combat School*, *Renegade*, *Target Renegade*, *Lord of the Rings*, *Barbarian*, *The Living Daylights* and many more.
James, 0730 67105

Help needed on *Batman the Movie*, *Turtles*, *Chase HQ*. Help given on *Untouchables* and *Operation Thunderbolt*.
Gareth, 0222 551166

My DMP 2000 printer manual is in Spanish! Has anyone got an English version they would be prepared to part with or lend me? I need to know the control codes!
Graham, 0753 79640

Wanted: I need a colour monitor for an Amstrad CPC 6128. I will swap my GT-65 green monitor plus cash for one, or if you've got one for sale please call me.
Brian, 0702 337511

Has anyone got *Elite* on disc and is willing to swap it for either *Fighter Bomber*, *Lords of Chaos*, *Castle Master* or *Italia '90* (all on disc)? Also lots of games on tape and Citadel miniatures for sale.
Martin, 0628 32434 4pm-10pm

Does anyone have *F-16 Combat Pilot* or any other good flight sims? Will swap for *Altered Beast*, *Ninja Spirit*, *Licence to Kill*, *Power Drift*, *Crackdown* or many other good games. Must be 464 tape originals.
Graham, 041-762 4392 outside school hours

Wanted: *Stunt Car Racer* and *AmDrum* with extra drum kit and *Kit Editor* program. Will swap for either *Batman*, *Untouchables*, *New Zealand Story* or two for *AmDrum* etc. Also cheap Multiface wanted.
Simon, 0538 723135 4pm-5pm

OI!

Helpline is for readers wanting help, tips or penpals, or offering any of the above. No money is to change hands, OK? This page is for *free* help only. If you send in an entry asking for money for your services you're wasting your time and a stamp – it'll be straight in the bin. On the other hand, send in a cheque for £5 and you could go in *Small Ads*...

Help! Has anybody got *Italy 1990* from US Gold on disk. Reasonable prices paid (£10).
Keith, 0203 673686

Help! Need passwords for levels two and three of *The Vindicator* (tape). Any cheats for *Barbarian 1* and *2* (tape) please.
Peter, 0387 61595 5pm-7pm

Wanted: *Bloodwych*, *Turrican*, *War in Middle Earth*, *Chase HQ*. All on tape for 464. Will swap: *Kwik Snax*, *Golden Axe*, *IK+*, *Paperboy* or *Captain Blood*.
Austin, 010 353 051 72591 (Ireland)

Wanted: *After the War*, *Heroes of the Lance* and *X-Out* (tape or disc). I am willing to swap for *Fists 'n' Throttles* (five games), *Dizzy 3*, *Spy vs Spy 3* and *3D Grand Prix* (all tape).
Craig, 0294 54576

Badly wanted: *Rainbow Islands* on tape. Will swap for *Escape from the Planet of the Robot Monsters*. Also have other games to swap inc *Fantasy World Dizzy*, *Gwah!* and *Ghosts 'n' Goblins* on tape.
Nathan, 0495 221854

Wanted: *Lotus Esprit*, *Power Drift*, *Bloodwych*, *Turrican* and *Italy 1990* on tape. Will swap for *Thunderbirds*, *Rainbow Islands*, *Rick Dangerous* or three budget games of your choice.
William, 0896 831278 5pm-7pm

Wanted: *Skate Wars*, *Turrican*, *Kick Off 2*, *Golden Axe* or *Lotus Esprit* on disc. I will give five budget cassettes for each game.
Alan, 0494 785865

I have *Red Arrows*, *10 Computer Hits* and *Thriller* pack on tape. Will swap for *Rock Star Ate My Hamster*, *Kwik Snax*, any good pinball game or *Pub Trivia*.
Graham, 0272 509235

Wanted: *Back to the Future* and *Star Trek* (tape). Swap for *Red Heat*, *Running Man* or others.
Gordon, 0203 312591 after 6pm

Magnum Lightphaser plus six games (disc or tape) swap for *X-Out* and *Turrican* (tape only).
Mark, 0795 661157 after 6pm

Help! I desperately need *Lightforce* and *Jack the Nipper* for the 464. Will swap for *Collapse*, *Zub* and *Dream Warrior*. All tape versions.
Lee, 0363 772491

Will swap four from *Samurai Trilogy*, *Quattro Arcade*, *Super Sprint*, *Double Dragon*, *Green Beret*, *F1 Tornado*, *Live & let Die*, *Forgoten Worlds* for *Hard Drivin'* or *Super Off-Road Racer* (all on tape).
Matt, 0243 266918 outside school hours

Wanted: *Colossus Mahjong* on disk for 6128 Plus.
0235 850661 9am-9pm

Desperately wanted (disk): *Sim City* for *Skate Wars*.
Ed, 07048 79229

Wanted: *Ninja Spirit*. Will swap for *Gemini Wing* or *Run the Gauntlet* (tape).
Matt, 0329 661259 Mon-Sat 10am-8pm

Wanted: *Bubble Bobble*, *Rick Dangerous 1 & 2*, *Night Shift*, *Sly Spy*, *Night Hunter*. Will swap *Spy Hunter*, *Ghosts 'n' Goblins* and many more.
Thomas, 0661 36233

PEN-PALS

Male or female pen-pal wanted, age 14-19 (no photos please). (*Why not?*) I enjoy reading science fiction.
John, 010 353 1 2855329 (Ireland) (*Thanks for the Blake's 7 poster, John!*)

Pen-pal wanted, age 10-12, to swap and lend games.
Ali, 0532 657573

AA

Fujitsu DL900

£294 (inc VAT) • Fujitsu Europe Ltd (081 573 4444)

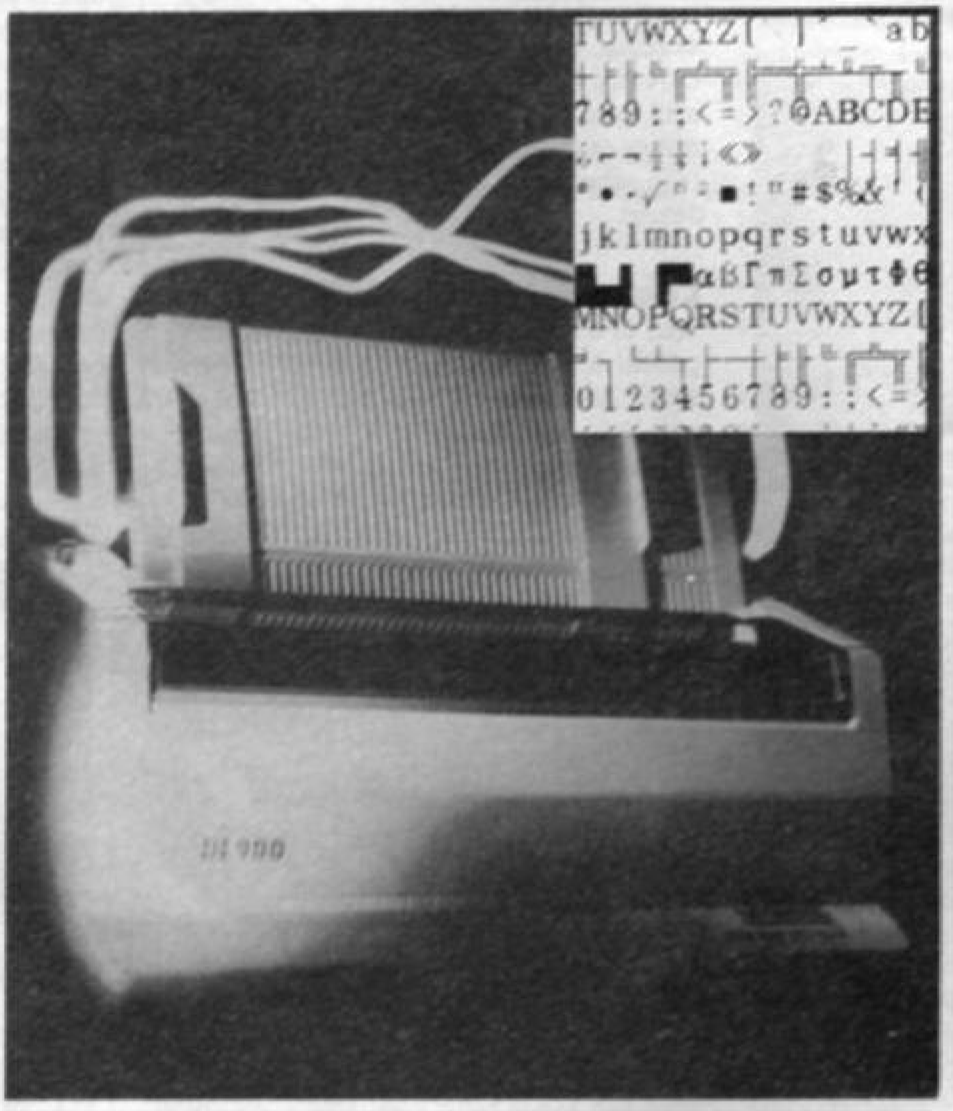
"Of oyl the desks in oyl the wurld, you had to walk onto mine. But at least you didn't take up much room when you got there..." ADAM PETERS falls in love with Fujitsu's very tidy new 24-pin printer...

The first thing that'll strike you about the Fujitsu DL900 is that it has a very small footprint. Design wise, it looks both old fashioned and modern. Its blocky, vertical look evokes memories of printers in the days when there were only a few hundred computers in the world, most of which filled whole floors of big buildings.

But then again, just as fashion fads come back the way that boomerangs are supposed to, so too do design ideas, but more streamlined and more modernised. And who's complaining if it means plenty of free space on your desk. The DL900 might look a strange beast, but it certainly does the biz.

The machine has an off- line set up mode. These are becoming ever more popular at the mo. Basically, instead of dip- switches you can change print options, emulations, character sets and all that, simply by pressing keys on the front panel. The printer prints out a list of options, and you move the printhead across the page (with the mode key), and then use the form feed button to to select an option and see the next menu.

These systems are a bit complicated and daunting at first, but give you more control and are less trouble-fraught than fiddling about with dip- switches.



• The Fujitsu DL900 is incredibly compact for a wide-carriage 24-pin printer. It can also print a full range of characters (inset). The machine is also very quiet in operation.

The Fujitsu has four emulation modes – Fujitsu DPL24C (the company's own printer language), IBM Proprinter XL24 and Epson LQ-2500 and LQ- 2550. Either of the last two will work with the CPC. The DPL24C printer driver is supplied, but only on a PC format (good name for a mag that) 5.25" disk.

Unfortunately, this somewhat limits your options as certain features of the machine have no Epson control code. This means that, while they can still be selected through the off- line mode, they cannot be changed within a document. This limits the number of fonts and effects you can use in the same piece, which is a bit of a shame, but there you go.

There are seven resident fonts, with space in memory for a further two (downloaded from optional font cards). Unfortunately, only three of these can be selected through the Epson language. Humph.

There's a very good quiet mode, so quiet you can hear a pin- cushion drop. Very useful for when you become a secret agent, creeping round some enemy base, and you want to do some printing without giving yourself away. Er, but there's probably lots of other circumstances in which it'll be useful too.

What's more, there's also a 110ms line feed speed, a 2 ips form feed speed, an MTBF of 6000 hours, optional PRF- skip, a DC3- CDE, full ECMA94 and ISO8859 implementation, CNT- only PPR- out, 7- bit or 8- bit world- LG, LFT- end up to 41 columns, top- MRG up to 10 lines, no slash ZEROFNT, and bi- dir or uni- dir PRT- DIR. And you can print stuff with it too.

The DL900 is reasonably fast and has a massive (24K) memory buffer. Good news for people planning to knock up their memoirs on their CPC. Print quality is not bad for a 24-pin, though other machines (such as the Star LC24- 200) do eclipse it.

So why buy a Fujitsu DL900? It's very stylishly designed, will take up very little space on your desktop, has a load of built in fonts and effects, good quality print out, a very large memory, and it can hold its own in the fast lane. It's also very good value, at a whisker under £300.

So there you go, a confident recommendation. Buy the Fujitsu DL900 – it's not at all bad, actually. **AA**

TECH SPECS

Number of fonts	7*
Number of pins	24
Draft speed	180 cps
LQ speed	60 cps
Resolution	360 x 360 dpi
Interface	parallel
Tractor type	rear
Auto paper park	Yes
Buffer size	24K

* Only three of these are available in Epson mode

GOOD NEWS

- Doesn't take up much space
- Very large memory
- Loads of fonts and effects
- Lots of upgrades

BAD NEWS

- Some features not available in Epson mode
- Ribbons may be hard to get hold of

Verdict 90%

Printers

Of all the things you're likely to buy once you've got your computer (software, hardware, peripherals etc), buying a printer probably represents the largest outlay. Make sure you get it right with the *AA Buyers' Guide*...

It's important to know what you're buying and, perhaps more importantly, what you're looking for. What features are available? What features do you need? Will a cheaper machine prove just as effective for what you want to do?



● The CPC will work with any Epson-compatible printer, but you do need a special lead – see 'Compatibility problems'.

The prices we have listed are all manufacturer's recommended retail prices. Don't expect to pay anything like these amounts. Mail order warehouses will be able to supply most machines much cheaper than this. For example, the Citizen 120D+ has an MRRP of £234 (inc VAT), yet is available from various mail order outlets for around £130-£140. Some makes (e.g. Epson) have lower mark-downs than others, but it's always worth shopping around.

Compatibility problems

Your CPC should work with any printer with a parallel interface, so long as it has an Epson emulation mode (virtually all of them do, including all those listed on these pages). If you have one of the original CPCs, you will also need a PL-1 printer lead. These cost £10-£12, but many outlets will supply one free with the printer (you'll need to specify what computer you have).

The Plus machines have a different socket, and need the standard IBM parallel interface cable. Many outlets will supply this free with the printer automatically.

There is a minor fault with the Amstrad that requires pin 14 on the printer cable to be disconnected (otherwise you get extra line feeds all over the place). Most cables are already cut when supplied, but be sure to check in the shop to save yourself lots of hassle later – the eighth wire from the right at the computer end should have been snipped. If it has not been done, and you get unwanted double line spacing when you print, another solution is simply to place some tape over the last four pins on the top right of the printer edge connector (as you look at it from above).

BEST BUY 9-PIN PRINTER
PANASONIC KXP1180 (£253)

The **KXP1180** has, quite simply, the best quality print we have ever seen on a 9-pin in this price range. The **Star LC-20**, descendant of the best-selling dot matrix, the LC-10, pushes the Panasonic close, and is also a very worthwhile purchase.

Speed freaks will want to take a look at the **Samsung SP0930N** with its lightning-fast CPS count. Writing a novel and want a large buffer memory? Take a peek at the **Olivetti DM109**. And if money's a bit tight, try the **Mannesmann Tally MT81**. The Citizen 120D+ ain't too bad either. All in all, a lot of worthy lumps of plastic to choose from.



● The Panasonic KXP1180 might look a bit like a breeze block, but it certainly doesn't print like one. A triffic machine.

BEST BUY 24-PIN PRINTER
STAR LC24-200 (£375)

The 24-pin market is one of ever decreasing price and ever improving features. The **Fujitsu DL900** (reviewed on page 61) cuts more mustard than most, while the new **Epson** models – the **LQ200** and **LQ450** – are being awaited with bated thingy. We got a bit flustered over the **Panasonic** and **Olivetti** models too.

At the end of the day, though, the **LC24-200** just nudged past the winner's line in front. It's fast, packed with fonts and the print quality and build are had to criticise. There's a colour model available, too.

Jargon-busting

Dot matrix printers are the most common type. These work by having a print head consisting of tiny pins which are electronically triggered as the print head passes along the ribbon, forming words and sentences as the 'matrix' of pins strikes the paper through the printer ribbon. There are two types of dot matrix printer, **9-pin** and **24-pin**.

24-pin printers are more expensive than the simpler 9-pin types, but the print quality they offer is very much higher. Most DTP (desktop publishing) packages are only designed for 9-pin printers, though, and the output from a 24-pin machine often has lots of nasty white lines on it.

Draft quality – Most printers have two different modes. The draft mode, which prints out very quickly, but is of a poor quality 'dotty' variety, is mainly for rough work and draft copies (hence the name!).

NLQ quality – (Near Letter Quality) – on 9-pin and LQ (Letter Quality) on 24-pin, is the better quality printout required for final versions, letters, reports etc. This prints out much slower than draft, and on 9-pin machines requires the print head to make two passes over each line.

CPS stands for Characters Per Second, and is a measure of a printer's printing speed.

Buffer – Every printer has an in-built memory buffer, used to store up text for printing. A large printer buffer means the computer can dump an entire document to the printer, and you can then carry on typing away, leaving the printer to do its thang.

Fonts – today's dot matrix printers also have an increasingly large number of NLQ/LQ **fonts** (different typefaces) supplied as standard, together, in many cases, with an option to buy additional plug-in 'font cards'. Alternative fonts can be selected either via the control panel or by sending down **control codes** from the computer.

Control codes are a collection of ASCII codes that the printer recognises as a specific command. These can usually be set up by the user, allowing quite sophisticated printer control.

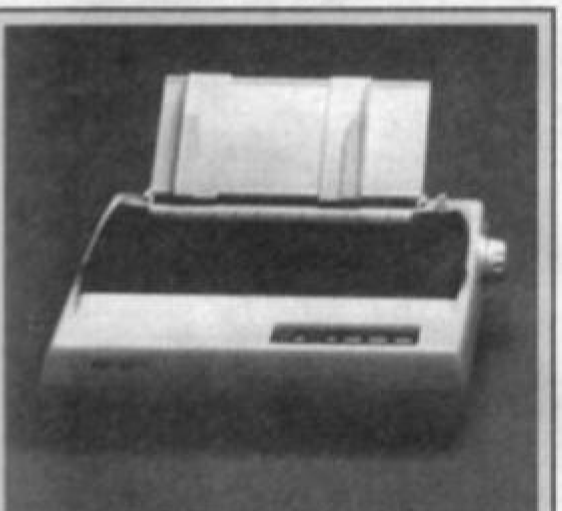
ERS' IDE

Other printers

Apart from dot matrix printers, there are also daisywheel printers (basically computer-controlled electronic typewriters), though these are going out of fashion. Ink jet printers work by controlling a fine spray of ink, using electro-magnetic stuff to enable the spray to only reach the points required to form the necessary words etc. Laser printers are the most expensive of the lot, though very few, if any, are compatible with the CPC.

Colour dot matrix printers are a popular choice, though there is limited software compatibility and special software is required for colour screen dumps etc.

It's best to investigate colour printing a bit first before investing in a printer purely for colour purposes. Colour printers can take standard black ribbons as well, though, making them flexible alternatives.



• The Star LC24-200 - a truly bostin' piece of kit. Plug your CPC into one today and you won't look back.

Typestyles - e.g. italic, bold, condensed - are included on most printers, and occasionally also effects, (e.g. shadow, outline, strike-thru).

DPI - Quality of graphics output is usually given in **DPI** (Dots Per Inch) - usually 240 DPI on a 9-pin and 360 DPI on a 24-pin.

Tractor Feed - All printers also allow for the use of both tractor-feed (continuous) and cut sheet (ordinary) paper.

Carriage width - Standard printers have a **carriage width** of 80 columns, though 132 column printers are growing more widespread. These allow for A3 sheets to be entered longways and A4 sheets sideways. These aren't as wide as 'proper' A3 printers, though, which accept sideways A3 and longways A2.

THE BEST OF THE REST

9-PIN DOT MATRIX

Amstrad DMP3160
☎ 0277 230222 • £234
Front-loading, with standard NLQ and draft modes. Fairly slow and slightly fragile-looking.

Citizen 120D+
☎ 0895 72621 • £234
Slow, with poor quality draft print, but good NLQ. Very quiet, and available at massively discounted prices.

Mannesmann Tally MT81
☎ 0734 788711 • £185
Cheapest dot matrix printer. Good quality print in both modes, and excellent manual. **AA Recommended.**

Olivetti DM109
☎ 0958 690790 • £247
Five fonts and massive (21K) buffer. Very fast (200 cps), very 'dotty' draft mode. Slow NLQ. **AA Recommended.**

Panasonic KXP1081
☎ 0344 853915 • £241
Chunky beast, with reasonable NLQ mode. Good manual and average speed, but on the whole uninspiring.

Panasonic KXP1180
☎ 0344 853915 • £253
Replacement for the KXP1081, with four fonts, faster printing, larger (but still small) buffer. **AA Best Buy.**

Philips NMS1433
☎ 081-689 4444 • £235
Fast three font machine, with small (2K) buffer, and reasonable printout quality.

Samsung SP0930N
☎ 081-397 9944 • £222
Cheapest multi-font machine (featuring three fonts). Very fast indeed (300 cps draft, 50 cps NLQ). **AA Recommended.**

Seikosha SP2000
☎ 0753 685873 • £234
Large (6K) buffer, but poor graphic resolution. Run of the mill machine.

Star LC20
☎ 0494 471111 • £234
Replacement for the popular LC10 (which is still available). Stylish design, with four fonts and good quality print.
AA Recommended.

24-PIN DOT MATRIX

Amstrad LQ3500di
☎ 0277 230222 • £351
Faster version of the old LQ3500. Small buffer for a 24-pin (7K) and only two fonts.

Brother 1324
☎ 081-330 6531 • £375
A massive seven fonts and fast printing (216 cps draft, 60 cps LQ). 8K buffer. A pretty good buy.

Citizen 124D
☎ 0895 72621 • £328
Very slow for a 24-pin, with only two fonts on offer. It's cheap, though.

Epson LQ200
☎ 0442 61144 • £281
Replacement for the LQ400, offering eight fonts, 11 graphics modes etc. Looks like it could be a corker. **Release Date - Sept 30th.**

Epson LQ450
☎ 0442 61144 • £328
Replacement for the standard-setting LQ550. Offers ten fonts, numerous styles and effects. **Release Date - Sept 30th.**

Fujitsu DL900
☎ 081-573 4444 • £294
Cheapest 24-pin machine, with 7 fonts, 24K buffer and fair printout. **Reviewed on page 61. AA Recommended.**

Olivetti DM124
☎ 0908 690790 • £351
Super-massive buffer (40K!), five fonts and very high resolution graphics. Very cheap for an Olivetti. **AA Recommended.**

Panasonic KXP1123
☎ 0344 853915 • £311
Four fonts and high resolution graphic printout. Fast LQ (63 cps). **AA Recommended.**

Star LC24-200
☎ 0494 471111 • £375
Replacement for the LC24-10 (still available). Five fonts and fast LQ (67 cps). Shadow and outline effects. **AA Best Buy.**

COLOUR DOT MATRIX

Star LC200
☎ 0494 471111 • £304
The most popular colour dot matrix printer. Four fonts included. See main text for limitations of colour printing. **AA Best Buy.**

INK JET

Brother HJ100
☎ 061-330 6531 • £405
Three fonts and a large (37K) buffer. Printing is very slow for an ink jet (83 cps), but then most ink jets cost £700-£1500!
AA Recommended.

• All prices quoted are approximate prices inclusive of VAT. Shop around - most mail order companies can supply machines for anything up to 40% less.

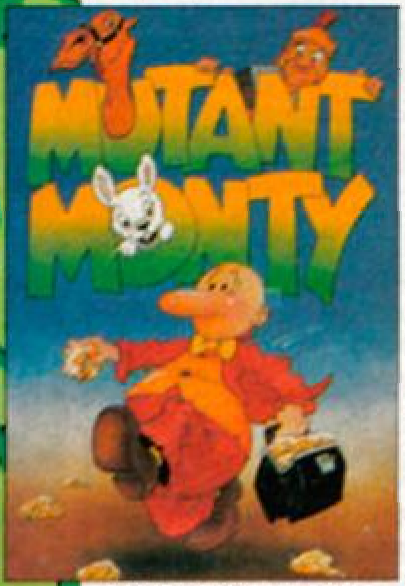
BUYERS' GUIDE

Platform games

So what's a platform game then? It's a game with platforms in it, what do you think? Basically, that means ladders to climb, chasms to leap, blocks to jump between, and baddies to fight...

Monty Mole was the first 'big' platform game to hit the screens of home micros, as well as the only computer game to appear on *News at Ten* (by virtue of its subject matter and the timing of its appearance, during the 1984-5 Great Miners' Strike).

You controlled the moley thing and had to leap around a mine avoiding all manner of crap sprites and trying not to fall to your death. Oh yeah, and collecting the bits of coal. You couldn't return to a screen once you'd left it, so you had to make sure you'd cleared it of every lump before moving on.



● ***Mutant Monty* – not a mole, but a human with the same name. And the same size nose.**

Also strolling in from the same picket line was some odd geezer called Willy who appeared in one mining adventure, i.e. *Manic Miner*, before donning space suit and rocket pack for the seminal romp *Jet Set Willy*. *JSW* became the first home computer game to sell over a million copies, perhaps through being the first platform game where you could move around freely collecting the items in any order.

Companies were quick to cash in on the popularity of this genre. Monty himself went on to feature in numerous other adventures for Gremlin, while Artic gave us *Mutant Monty*, a game featuring a human character whose first name wasn't entirely a coincidence!



● ***Manic Miner* was the prequel to the smash hit *Jet Set Willy*. And, er, it was a mining game.**

With the arrival of the CPC 464, in the middle of all this, came the appearance of a new hero on the platform stage. Roland (named after Amstrad's technical manager Roland Perry), who appeared in a whole series of celebrated Amsoft games, most notably *Roland in Space* and *Roland in Time*.

The popularity of platform games stemmed mainly from the fact that each time you played you would progress further, encounter new problems and see new screens. This gave the games more substance than many other types of games available.

Today's platform games are split between cute-em-ups featuring pixies and fluffy moo cows galore, and hard as nails kicking and punching games of violence and exploration (but mainly violence).

Whilst today complex arcade adventures and graphically-detailed fast-scrolling shoot 'em ups are more widespread and better selling, platform games certainly don't look like disappearing.

AA

BEST PLATFORM GAME

Rick Dangerous II (Micro Style)



● **Norweigans in silly hats, rope ladders, rolling boulders, flying worms, great graphics, gameplay... *RD2*'s got the lot!**

Just how good is *RD2*? Good enough to have scored higher within these pages than any other game. Good enough to have topped the 1990 Reader's Chart. And that's pretty darned good.

Guide Rick, now evoking comparisons with Flash Gordon where once it was Indiana Jones, through untold levels (five, but don't say I told you) of tough platform puzzles. The place is teeming with aliens, lasers and brilliant, comical graphics.

Four missions can be accessed from the main menu, the fifth once you've completed all the others. Each mission has its own graphical style and enough challenging puzzles and traps to keep you up at 4am with toothpicks under your eyelids and a black coffee by your side. Just one more go...



● **Each level has its own style. Rick'll certainly take some beating in the platform game stakes!**

PLATFORM GAMES TOP TEN

1) Rick Dangerous 2 *(Micro Style)*
Lots to see and lots to do - it's a helluva game. 97% (AA62)

2) Rainbow Islands *(Ocean)*



A rainbow-climbing, star-tossing fluffy bunny of a game. 88% (AA56)

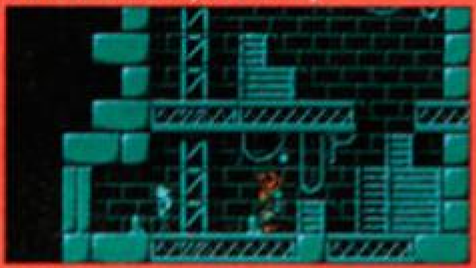
3) Nebulus *(Hewson)*
Guide your pig up a series of towers in this innovative oldie. 93% (AA33)

4) Navy Seals *(Ocean)*



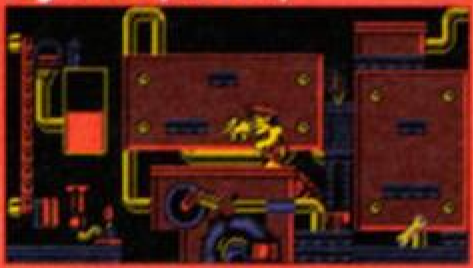
Run, jump and shoot in this console-shaking yankee SAS jobbie. 88% (AA69)

5) Switchblade *(Gremlin)*



Ocean's exploratory kung-fu console classic, equally fab in its recent tape and disk versions. 90% (AA68)

6) Nightshift *(US Gold)*



No baddies to battle here, just a big machine to keep running. 85% (AA69)

7) Batman the Movie *(Ocean)*
Something of a rarity, an excellent film licence. 90% (AA51)

8) New Zealand Story *(Ocean)*
The graphics are naff, but the action certainly isn't. 65% (AA50)

9) Rick Dangerous *(Firebird)*
The Indiana Jones style prequel to the number one. 83% (AA48)

10) Edd the Duck *(Impulze)*



Everybody's favourite small green duck just sneaks in. 75% (AA68)

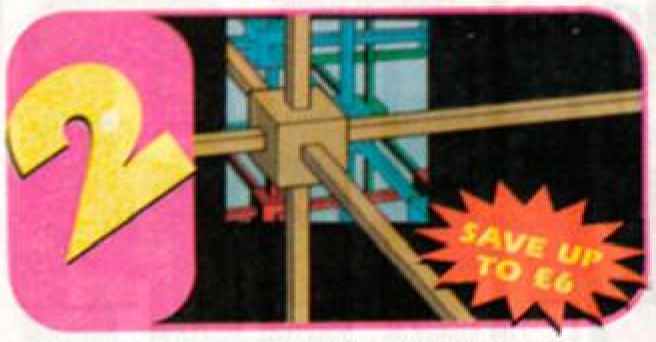
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AAfterthought

Behind the scenes...

All the latest gossip from *AA* Towers. Self indulgent... us? Of course not. And we'll be giving over eight pages of next month's issue in order to explain why...

It's been a funny old month, really, with its fair share of heroes and villains. The AA Supreme Dedication award has to go to **Rod**, who earns the title 'Mr Syntax Error in Line 140' for his performance in typing in the whole (114-line) *Drumkit* program from an old issue. It now resides on the cover tape, a splendid testament to committed slog. Mind you, we did have to call in Rentokill to debug it.

Speaking of bugs brings us swiftly on to **Adam P** possibly the only games reviewer in Britain unable to get past the loading screen without some sort of cheat. Adam's a bit traumatised at the moment, what with the death of his pet butterfly Cecil. Cec flew in through the window last week, and steadfastly refused to fly back out again, finally popping his clogs this morning.

Apparently seven days is good going for a butterfly, they usually only last four. So no twelve month guarantees with them then.

Speaking of guarantees, er... **Adam W** hasn't been around much this month, what with the launch of the new *Public Domain* magazine he's editing. (£2.95 from all good newsagents - there's no CPC stuff in it, but buy it anyway, to keep him happy).

Paul disappeared for a bit too. We felt he needed a recuperative break after his antics at the photo shoot for last month's cover, where he managed to break virtually every item of furniture in the studio. He demolished each item in turn, either by sitting on it, leaning on it, or, on one occasion, merely glancing wistfully in its general direction.

He went back to Brum for a week and seems to have recovered now. We still keep the coffee table hidden till he goes home, though, just to be safe.

Maryanne, meanwhile, has started taking driving lessons. Avon police are 'advising motorists to expect lengthy tailbacks in the Bath area every Monday morning for the next ten weeks.



● **The scene in Bath High Street, last Monday morning.**

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